

JPRS-TEN-91-015  
7 AUGUST 1991

Foreign  
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1941 - 1991

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## ***JPRS Report***

# **Environmental Issues**

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# Environmental Issues

JPRS-TEN-91-015

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7 August 1991

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**GLOBE Members Call for Global Environmental Laws; Appeal to Economic Summit Leaders**

OW0307094491 Tokyo KYODO in English 0910 GMT 3 Jul 91

[Text] Tokyo, June 3 KYODO—An international group of environmentally concerned legislators ended a three-day meeting Wednesday in Tokyo with a package of measures calling for radical action on Antarctica, driftnet fishing, deforestation, and other global environmental problems.

The Global Legislators Organization for a Balanced Environment (GLOBE), whose members come from Japan, the European Community, the Soviet Union, and the United States, directed one of its main calls for a closer watch on the environment to the July 15-17 summit of seven major industrialized nations meeting in London.

In a letter addressed to British Prime Minister John Major, who will host the summit, the GLOBE members urge the economic powers to link "a substantial proportion of any aid" to the Soviet Union to environmental restoration.

"There can be no economic summit in today's world that is not also an environment summit," the letter says.

The letter warns that environmental problems facing the earth are of such magnitude that the seven years until the next time the annual summit is held in Britain, are "all the time that remains for decision makers to make decisions."

The GLOBE members also sent a letter to U.S. President George Bush urging the U.S. Government to approve the environmental protection protocol to the Antarctic Treaty.

The United States is the only one of 39 parties to the protocol which refuses to give its approval to permanent protection against mining in Antarctica.

The GLOBE members also called on the U.S., Japan, and European Community countries to eliminate illegal logging of tropical timbers in places such as Papua New Guinea, Palawan in the Philippines, and Sarawak in Malaysia.

At a press conference after the close of the meeting, the president of GLOBE International, U.S. Senator Al Gore said alleged corruption in countries which export illegally cut timber could be stemmed by putting pressure on the governments of those countries and on the importing nations.

Gore, a Democrat from Tennessee, said the meeting also produced the world's first text for an international convention on forests.

He said the text is not complete but should be seen as a "starting point" for the preparation of a forests convention in time for a U.N. Conference on the Global Environment in Brazil in June 1992.

Japanese and U.S. members of GLOBE differed during the meeting on their approach to solving the environmental problems posed by large-scale driftnet fishing.

But in a unanimously approved last-minute compromise, delegates agreed on an action agenda for reducing the level of destruction of marine life by driftnets and other indiscriminate fishing techniques.

Gore said the agenda agrees "in substance" and expands on a U.N. call for a moratorium on large-scale high seas driftnets from June 30, 1992, unless effective conservation and management measures can be taken.

During the meeting, Soviet GLOBE Member Alexey V. Yablokov told delegates that environmental destruction in areas such as Chernobyl, the South Urals, and the Aral Sea have turned much of the Soviet Union into "a zone of pollution."

GLOBE members meet every six months and aim to coordinate legislation on environmental issues in each of their countries.

It was the first GLOBE meeting in Tokyo since the group's formation in March 1989.

**Eco-92 Secretary General on Impact of Rio Conference**

91SM0360Z Sao Paulo VEJA in Portuguese 29 May 92 pp 7-9

[Interview with Maurice Frederick Strong, secretary general of Eco-92, by Euripedes Alcantara; place and date not given]

[Text] *The secretary general of Eco-92 says that if man does not change the way he relates to nature, ecological disaster will be inevitable.*

*Since he was a child, Canadian Maurice Frederick Strong, 62, has taken nature seriously—what has changed is his way of looking at it. In Oak Lake, his hometown in Manitoba Province—a rural prairieland in the center of Canada—young Maurice was already indignant at the people who were polluting his village, being certain that the planet was a sanctuary to be respected. In 1972, after becoming wealthy dealing in petroleum, Strong was secretary general of the Conference on the Environment and Man, which was held in Stockholm by the United Nations (UNO). That meeting, which came to be known as "Woodstockholm" in a reference to the famous rock festival called Woodstock, wound up being dominated by environmental activists, who at the time were identified with hippies—a tendency that it took years to dispel.*

*Strong, who has never since abandoned his environmental preaching, is now preparing—again as secretary general—for the Second UN Conference on the Environment and Development, which Rio de Janeiro will host in June of next year. The puddle jumper of 1972 has become a jumbo jet that is going to make history by bringing together an unprecedented number of chiefs of state and heads of the world's biggest companies. With no formal academic training but with honorary degrees from 26 of the planet's top universities, Strong has exchanged his religious feeling regarding nature for a more pragmatic view of ecological questions. "What is at stake is not the well-being of plants and animals, but the global economy and the survival of the species and of civilization. The conference is our last chance to save the planet from barbarism," says Strong, who is married and the father of four. One of the few high officials in the United Nations who does not speak French, Strong is the only one who speaks Inupik, the language of the Eskimos with whom he spent two years as an adolescent, and Swahili, the language of the African natives of Kenya, among whom he also lived.*

[Alcantara] What kind of impact is Eco-92 likely to have as far as improving the planet's environmental conditions is concerned?

[Strong] It is a rare opportunity for planet earth. I would say, without exaggerating, that it is the world's last chance to get off the path to self-destruction. Over the past two decades, there has been a lot of talk, and ecological awareness has increased, but the global environment has steadily deteriorated. The Rio conference is going to bring together the largest number of chiefs of state in the history of mankind and the heads of the most powerful companies in the world. They are all going to deal with a single topic: how to save the planet. They are going to make public commitments and sign the Charter of the Earth, a document of intention on a global scale which should result in historic changes in the way man relates to nature.

[Alcantara] Rulers are usually good at talking but slow to take action. Doesn't that worry you?

[Strong] Many times that is exactly what happens. In this case, however, the scientific evidence that the planet is in danger is such that I don't see how the world's leaders can avoid taking specific action. They will have a unique chance, and if they fail, there will not be another opportunity.

[Alcantara] One complicating factor in this story is the fact that the chasm between poor and rich countries is widening. The wave of ecological concerns has made that gap even more obvious. The rich countries are successfully freeing themselves of the effects of pollution, while the inhabitants of the Third World are becoming increasingly entangled in ecological problems caused in most cases by the lack of money. Saving nature also involves combating poverty, does it not?

[Strong] Not only combating poverty but eradicating it from the planet. When you get right down to it, that is the objective of the conference. The rich countries have become aware that the earth constitutes a fragile and closed ecosystem and that pollution in the Third World affects everyone in the world. They have also come to realize that poverty generates pollutants and that tropical forests are often assaulted by destitute migrant settlers who have no choice except to cut and burn trees in order to survive. I therefore believe that the rich countries are really going to commit themselves to the eradication of poverty in the Third World. Not out of charity, but because of the need to preserve the global environment on which everyone depends. The whole world would benefit from a Third World that does not pollute. So the whole world must help.

[Alcantara] Even so, that is a very optimistic viewpoint.

[Strong] It is optimistic but realistic, because we are living in a time of extreme didacticism in the world economy. Countries and companies are quickly learning that sustained development—that is, progress with a concern for nature—is not just an alternative path but the only economically viable means of staying in business. Setting up a factory that pollutes as little as possible is not an option that a businessman chooses just to please militant ecologists. The most competitive modern companies are "naturally" less polluting. They consume less energy, do not burn fossil fuels, and deal with synthetic materials that can be handled safely and cleanly. To enter into the competition, industrial parks in the Third World will also have to modernize, with the result that their factories will pollute less.

[Alcantara] Is ecology becoming too serious a matter to be left to ecologists?

[Strong] In a sense, yes. A country's minister of ecology is in fact its minister of economy. In companies, environmental matters are becoming increasingly linked to production. What is happening is that economic and ecological objectives are coinciding admirably. In the 1970's, businessmen approached ecological topics with some hostility. Installing filters in smokestacks, manufacturing less polluting automobiles, and treating the toxic waste from factories meant reducing the company's profitability and, consequently, its competitiveness. At the start of the 1980's, ecology was beginning to be more accepted, but largely because of external pressure from consumers. The environmental component has now been incorporated into the production process.

[Alcantara] What examples of this new reality could you mention?

[Strong] There are many examples of companies which were in shaky condition but which went through a modernization process in which they cleaned up their production processes and now exhibit enviable financial health precisely because they produce in a clean manner, consume less energy, and depend less on crude raw materials such as minerals. Japan, which is not yet a

perfect country in environmental terms, is the most dramatic example of this. Japanese industry doubled in size in the course of the decade while reducing its energy consumption by 40 percent and practically banishing the discharge of polluting wastes into the air and water.

[Alcantara] But Japanese businessmen were forced to fit into that pattern of clean operations by some of the strictest environmental legislation in the world.

[Strong] True. Following the tragedy in Minamata Bay in the 1960's, when tons of mercury were dumped into the water with disastrous effects on the population, Japan passed severe laws punishing those abuses. That was what saved its industry. By adopting clean production processes, Japanese industry projected itself vigorously into the future and saved millions of dollars through the development of more modern and more economical equipment. At present, Sweden and Germany are closely following the same path. Wherever competitiveness in industry is sought, the technological solutions invariably also result in manufacturing processes less harmful to nature.

[Alcantara] Do you believe that Third-World countries such as Brazil have any chance of catching that streetcar?

[Strong] There is no other solution. They need to be helped by the rich countries in the Northern Hemisphere, but they can no longer insist on forms of development that are irresponsible toward nature. One of the strongest reasons for this is the fact that a polluting economy is always sluggish and produces expensive and uncompetitive products.

[Alcantara] Can it be said, then, that an automobile which causes less pollution is by definition easier and cheaper to produce than an old, fume-belching model?

[Strong] Ecology is going to control the business world in coming decades. The first one to discover that clean production methods are more economical is going to jump ahead of his competitors. The one who insists on old methods based on the abusive use of inputs will not have a chance in the market. Businessmen who arrive at that conclusion and invest in the modernization of their manufacturing facilities are being pleasantly surprised. In some branches of industry such as petrochemicals, for example, modernization can reduce overall production costs by up to 75 percent.

[Alcantara] What is your opinion of the so-called green GNP [gross national product]—the parallel accounting system for countries in which expenditures on ecological concerns are counted as wealth?

[Strong] It is a realistic way of measuring development, and its credibility is rising steadily. A country may believe it is growing and developing at any cost—even that of destroying its natural resources—but in fact it is not developing: it is destroying itself. It is good that there should be a universally accepted way of measuring progress that takes concern with the environment into

account. The green GNP is an accounting system that is useful to the sustained development we advocate. That kind of development, like any other, must be the result of progress, create jobs, give businessmen profits, and be guided by the laws of the marketplace. But it must not be based on the old and dangerous concept that natural resources are inexhaustible.

[Alcantara] What is your evaluation of the planet's environmental situation at present? Are we really as bad off as it seems?

[Strong] We have almost reached the point of no return. If planet earth were a business, it would be on the verge of bankruptcy because it is squandering its natural resources, which are its capital, as though they were eternal. Those resources are not renewable, and they are being treated as though they were. If the global economy continues to be treated in that fashion—if we persist on that path—life as we know it will be jeopardized. Not only will progress be interrupted, but there will also be regression. At the conference in Rio de Janeiro, we will try to launch the world into a new era that will make profound economic change possible by preserving the environment while maintaining the rate of progress.

[Alcantara] Brazil has been accused of burning Amazonia down and being a potential source of global tragedy consisting of an excessive heating of the atmosphere—the so-called greenhouse effect. Don't you feel that too much is being expected of the poor countries when everyone knows that the biggest polluters are the developed countries?

[Strong] It is a fact that the largest quantities of polluting gases involved in the greenhouse effect are discharged into the atmosphere by the industrialized countries. It happens that those countries are already making a tremendous effort to contain those emissions, which are harmful to the atmosphere. The governments of those countries are taking unhesitating and resolute action to solve the problem. They are cleaning up their lakes and rivers and stopping polluters with severe legislation. In the Southern Hemisphere, there are good isolated experiences—one example being the Rio Doce Valley Company's Carajas Project in Brazil—but the keynote is still one of aggression on a large scale, especially with respect to tropical forests.

[Alcantara] Most of the harm being done to the tropical forest is the result of settlement in that region by migrants from the southern part of the country who were encouraged by the government, especially during the 1970's, to move there. Do you feel that the government could have foreseen back then what was going to happen?

[Strong] Any planner with good sense would know that Amazonia is not suitable for large-scale settlement. They should have worked out some solution other than that settlement plan for Amazonia. You cannot try to fix a social crisis by creating another—ecological—one.



[Alcantara] But now the settlers are there. They have had children and built towns, and they consider themselves permanent residents of the jungle. What should be done with them?

[Strong] There are two ways to tackle the problem. The first step would be to reduce the indiscriminate burning and felling of trees to a minimum by implementing an effective program of education and technical support regarding planting in the region. The second would be to create alternatives for working in a clean economy along more modern lines.

[Alcantara] Those two approaches would require inventiveness and commitment on the part of the government. From what we can see, both are lacking in Brazil, since the government is even considering the resumption of stockraising subsidies in Amazonia.

[Strong] That would be an absurd mistake. First of all, because subsidies themselves are a symptom of poor economics in any part of the world, but also because the Brazilian Government would be persisting in the worst of all possible ways of occupying the Amazon forest, and that is stockraising. Brazil needs to offer alternatives for sustained development in the region, and I am certain that incentives and investments from the rich countries would not be lacking. The experience those countries have had with replacing polluting activities that are hostile to the environment with other, more modern activities is extremely positive. More jobs will be created and a future with broad horizons will open up in a region where there was previously nothing but a deplorable situation.

[Alcantara] The available scientific data on the planet's environmental health are sometimes inconclusive and even contradictory. Sometimes the hole in the ozone over Antarctica is there and sometimes it isn't, and there is no concrete proof that industrial gases are responsible for it. We read in the newspapers that the burning of fossil fuels is going to cause the catastrophic greenhouse effect on the planet. But then further along, we also read where another group of scientists says the situation is not as serious as all that. Whom is the layperson supposed to believe?

[Strong] I am not one of those who buy the theory that scientific evidence is still inconsistent and that it is necessary to wait for more data before taking action. That is nonsense. A person who has high blood pressure, shows an abnormal cholesterol level in his blood, lives a sedentary life, and smokes five packs of cigarettes a day is not going to be told by the cardiologist that he is on the verge of death. He will be told that according to the available evidence, he has a good chance of developing a possibly fatal heart disease. I doubt that a psychologically normal person would go home, sit down, and wait for scientific proof that the factors mentioned by the cardiologist are in fact capable of killing him. What is most certain is that that individual will begin taking care of himself immediately. If people behave that way when

their personal health is at stake, why not adopt the same attitude toward the health of the planet? We must act now. Tomorrow may be too late.

[Alcantara] There is a more optimistic view of the future. Many researchers predict that fusion reactors producing clean energy will be in operation by mid-century. Automobiles will be powered by nonpolluting engines, and genetic engineering will make it possible to replant entire forests. Consequently, there are not many reasons for concern. What do you think of that way of looking at things?

[Strong] I think it involves a very big dose of confidence in the future which has little correspondence with the present. What we see is the boat tipping in the other direction—in the direction of accelerated and uncontrolled destruction. Moreover, that view is an invitation to inaction, when what we need to do is overcome inertia. The conference in Rio de Janeiro may have the beneficial effect of overcoming the inertia factor and launching the rich countries into an unprecedented effort to help the Third-World countries in their struggle to preserve the planet's environment.

#### **Japan To Donate \$1.5 Million for 1992 UN 'Earth Summit'**

*OW0207142791 Tokyo KYODO in English 1410 GMT 2 Jul 91*

[Text] Tokyo, July 2 KYODO—Foreign Minister Taro Nakayama on Tuesday pledged that Japan will contribute 1.5 million dollars for the 1992 United Nations Conference on Environment and Development (UNCED), Foreign Ministry officials said.

Nakayama made the pledge in a meeting with Maurice Strong, secretary general of the 1992 conference, saying that the government will provide the financial assistance to help underwrite the preparation for the so-called "earth summit," the officials said.

The announced contribution makes Japan the second largest donor to the conference so far, following Sweden, which is extending 3 million dollars.

The conference, scheduled to be held in Rio de Janeiro, Brazil, in June 1992, is expected to draw more than 10,000 participants from some 150 nations.

The top government officials, researchers, and citizens' groups expected to attend the conference are to discuss global-scale environmental preservation on the eve of the 21st century, the officials said.

During his meeting with Nakayama and Environment Agency Chief Kazuo Aichi, Strong urged Japan to play a more positive role in tackling global-scale environmental issues, such as providing more financial assistance and technical cooperation to the developing countries.

He said Japan is the most suitable country to take leadership in the field because of its successful counter-measures against environmental pollution.

Strong also called for more cooperation in preparing for the conference, pointing out that Japan and other nations are not yet showing sufficient enthusiasm in negotiations and discussions prior to the meeting.

### **Japanese Group Proposes Formation of UN Environmental Council**

*OW0507175891 Tokyo KYODO in English 1457 GMT 5 Jul 91*

[Text] Osaka, July 5 KYODO—A group headed by a top Western Japan business leader proposed Friday that Japan should take the initiative in setting up an environmental council as a major organ of the United Nations.

The group, known by the Japanese equivalent of Kansai Forum on the Global Environment, said many organizations have discussed measures to protect the global environment but have failed to achieve the desired results because of differing interests among the countries involved.

The forum said a UN environmental council could coordinate such environmental activities and speed decision-making on long-term policy.

Osamu Uno, leader of the forum, is also chairman of the Kansai Economic Federation, which groups top business executives in western Japan, centered on the Osaka-Kyoto-Kobe area.

The forum said Japan should play a major role in managing the proposed council by offering money and personnel.

This would allow Japan to make a major nonmilitary international contribution, the forum said.

The organization will present its suggestion to Japanese Government agencies ahead of the July 15-17 London summit of seven leading industrial nations.

### **Greenpeace Urges Japan To Pressure U.S. on Global Warming**

*OW0807131391 Tokyo KYODO in English 1237 GMT 8 Jul 91*

[Text] Tokyo, July 8 KYODO—The environmental group Greenpeace International called on the Japanese Government Monday to pressure the United States at the London economic summit to take further preventive measures against global warming.

Jeremy Leggett, a Greenpeace scientist, told reporters here that the United States is alone among the seven major industrial nations and the members of the Organization for Economic Cooperation and Development (OECD) which have not agreed to reduce carbon dioxide emissions.

Turkey, which is a member of the OECD, is the only other exception, he said.

Carbon dioxide is believed partly responsible for the greenhouse effect, which contributes to global warming.

"The Japanese economy has the ability to deliver the model for the new global energy infrastructure which the world needs to avoid the disaster of runaway global warming," said Leggett, who directs the group's science in the atmosphere and energy campaign.

Japan should persuade the United States to set targets and deadlines for carbon dioxide cuts in current talks on the global environment, he said.

The London summit is the last chance for the seven leaders to discuss the environmental problem before the UN conference on environment and development convenes next June in Rio De Janeiro, Brazil, he said.

Leggett said Japan should play a pivotal role in the issue at the summit.

Japan declared in its action plan last year to hold down its current level of per-capita carbon dioxide emissions through the year 2000 and beyond as part of international efforts to preserve the global environment.

He said simply stabilizing emissions of carbon dioxide is not enough and called for reductions.

### **Chile Deems Revision of Antarctic Treaty 'Not Advisable'**

*PY1207160691 Santiago Radio Cooperativa Network in Spanish 2300 GMT 9 Jul 91*

[Relay from the Foreign Ministry by Carmen Castro]

[Excerpts] Keeping an unpolluted environment also means preserving natural resources like those of the Antarctic. This was stated today by Oscar Pinochet de la Barra, director of the Chilean Antarctic Institute and Foreign Ministry special adviser for Antarctic affairs, who also said that the Chilean Government believes it not advisable to revise the Antarctic Treaty which was signed in 1959 and enacted on 23 July 1961. [passage omitted]

Regarding the revision of the Antarctic Treaty, which has been requested by some, Pinochet de la Barra recalled that this document, which was approved by 12 countries among them Chile, states that any of the signatory countries may request a revision 30 years after its implementation and that the approval of the majority is all that is needed to begin its revision. However, Pinochet de la Barra believes it would be difficult to improve on this treaty, adding that there is even the risk of disrupting its harmony. He said that most signatory countries agree with Chile and therefore, any updating of the treaty would have to be made through complementary protocols. One such protocols will be signed next October in Madrid. It establishes a 50-year moratorium



before the signatory countries decide whether or not to begin exploration work prior to the start of mineral exploitation in the Antarctic.

### **New Zealand Welcomes U.S. Decision To Sign Antarctic Protocol**

*BK0407075091 Hong Kong AFP in English 0746 GMT 4 Jul 91*

[Text] Wellington, July 4 (AFP)—New Zealand Foreign Minister Don McKinnon Thursday welcomed a United States decision to sign a compromise environmental protocol to the Antarctic Treaty.

The United States had appeared to back out of an agreement reached last week in Madrid by treaty nations, but President George Bush confirmed in a statement Wednesday that Washington would sign the accord.

Mr. McKinnon said the last block to achieving comprehensive environmental protection of Antarctica had been removed, as the protocol the United States would now sign would achieve a ban on mining the continent for at least 50 years.

"Final agreement on a protocol will achieve a return to consensus amongst the treaty parties. This can only be good, for both the protection of the Antarctic environment, and the stability of the treaty system itself," he said.

### **Group of Seven To Participate in Amazon Protection Project**

*PY1207160491 Brasilia Radio Nacional da Amazonia Network in Portuguese 1000 GMT 12 Jul 91*

[Text] The Group of Seven, comprising the United States, Canada, Germany, France, Italy, the United Kingdom, and Japan, will participate in a pilot project to protect the Amazon region. Funds for this project total of \$1.25 billion.

This information has been supplied by Luiz Felipe Macedo Soares, the head of Itamaraty Environment Department.

Macedo Soares said that the funds could be released during the Group of Seven meeting scheduled for next week in London.

### **EC Politician Says GATT Blocking Environmental Policy**

*OW0107142091 Tokyo KYODO in English 1133 GMT 1 Jul 91*

[Text] Tokyo, July 1 KYODO—The General Agreement on Tariffs and Trade (GATT) is one of the main obstacles to developing a world environmental policy, a member of the European Parliament said here Monday.

Hemmo Muntingh, a European Parliament member from the Netherlands, told an international body of politicians that draft legislation on the environment by European legislators is frequently blocked by the bureaucracy because it would infringe GATT rules.

Muntingh told the Global Legislators Organization for a Balanced Environment (GLOBE) general assembly that the Administrative European Commission has blocked attempts to frame legislation aimed at banning European Community (EC) imports of tropical timber from Sarawak in Malaysia on these grounds.

"The International Tropical Timber Organization (ITTO) agrees that the rate of deforestation should be diminished in Sarawak," Muntingh said.

"Instead, Sarawak has doubled its production of tropical timber, and we have a situation where seven days a week, 24 hours a day, deforestation goes on in one of the oldest tropical forests in the world.

"But the European Commission refuses to ban imports of criminally cut timber in Sarawak because it is a violation of the GATT rules."

Muntingh said the commission also cited GATT rules when blocking proposed legislation aimed at placing threatened plant and animal species and tuna caught in nets which also harm dolphins on a list of EC banned imports.

"Every time, we run into this wall of legalists who say that GATT is more important," he said.

GLOBE was formed in 1989 and consists of legislators from the EC, the United States, and Japan. Its members exchange information on and propose environmental legislation of global concern.

The three-day general assembly, which began Monday in the Diet Building, is the first held in Japan.

The 30 GLOBE members at the assembly also heard on Monday a GLOBE EC proposal for a world forest convention to protect the world's forest timbers from deforestation.

### **Declaration on Ecological Protection of Adriatic Signed**

*LD1307213491 Belgrade TANJUG in English 1645 GMT 13 Jul 91*

[Text] Ancona, July 13 (TANJUG)—The foreign ministers of Italy, Yugoslavia, Greece and Albania—Gianni de Michelis, Budimir Loncar, Antonis Samaras and Mohamed Kaplani—signed a declaration on the ecological protection of the Adriatic in Ancona today. The declaration is of broader importance for the region, above all political.

The matter concerns the practical implementation of the Adriatic initiative launched in Umag (Yugoslavia) in

September 1989 by Italian Prime Minister Giulio Andreotti and Yugoslav Prime Minister Ante Markovic.

The four countries expressed their responsibility and readiness to protect the Adriatic.

The importance of and broader interest for this initiative is seen in the presence of the president of the European Community (EC) Commission for the Environment, Carlo Ripa de Meana.

Gianni de Michelis told a press conference following the signing of the declaration, that it surpassed ambiental importance and was an integrating influence in a region of great importance to peace and security in Europe.

De Michelis announced that Italy would sign a new financial protocol (1991-1993), the so-called "second memorandum on agreement" with Yugoslavia, and that all Yugoslav republics would participate in its preparation and conclusions, and especially in the protocol's practical implementation.

De Michelis also said that Italy would open general consulates in all Yugoslav republics, with the aim of strengthening dialogue and links, and for a greater overall understanding of all Yugoslav viewpoints on its crisis.

Italy has consulates in Zagreb (capital of Croatia) and Ljubljana (capital of Slovenia).

De Michelis said that the opening of general consulates in all the republics did not affect Italy's stand on the resolving of the Yugoslav crisis, which is identical to that of the EC.

He welcomed a Greek Government's initiative for the signing of an agreement with Bulgaria and Turkey on the destruction of aggressive weapons, as a contribution to the processes of calming down and the building of a new European architecture.

The four ministers held a 30-minute meeting before signing the Adriatic declaration. Later, at a press conference, De Michelis expressed joint expectations that the Yugoslav crisis would be resolved in a peaceful and democratic way and in the spirit of the Helsinki Final Act and the Paris Charter.

At the meeting of the four ministers, Budimir Loncar underscored that all is being done in Yugoslavia to secure conditions for peaceful and democratic dialogue on the country's future.

"Our burning hope is that we will manage to return peace and internal balance through the strict implementation of European criteria and with the help of mechanisms of the EC and the Conference on Security and Cooperation in Europe (CSCE). Their contribution in finding a lasting and peaceful solution to the current crisis in Yugoslavia is of vital importance," underscored Loncar.

## **Soviet Nuclear Safety Experts Admit Faults in WWER-20 Reactors**

AU1607105091 Frankfurt/Main FRANKFURTER RUNDSCHAU in German 16 Jul 91 pp 1, 2

[Joachim Wille report: "Moscow Admits Faults in Nuclear Reactors"]

[Text] Frankfurt, 15 July—The nuclear reactors of the Soviet WWER-440 series, which are used not only in Kozloduy in Bulgaria, but also in the CSFR, the Kola Peninsula, and in Novo-Voronezh (Russia), do not meet "today's demands" as far as safety is concerned. This has been revealed in a paper of the State Committee for Monitoring Nuclear Safety, which has been made available to FRANKFURTER RUNDSCHAU. The likelihood of a meltdown, of a mega catastrophe, is 200 times greater than in the case of reactors in the West.

The Moscow paper on reactor safety was drawn up for a meeting of the Vienna-based International Atomic Energy Agency, and mainly deals with the pressurized water reactor Kola 1, which was put into operation in 1973. Soviet scientists have worked out that the likelihood of a meltdown, which would release massive quantities of radioactive substances in the environment, is "once in 180 reactor operating years." Adding up the years all WWER reactors have been in operation, this operating time has almost been reached; apart from the four closed reactors at Greifswald there are eight more WWER-440 in the Soviet Union and Eastern Europe, all of which were put into operation in the seventies. According to a study of the Society for Reactor Safety of 1989, the likelihood of a meltdown in an FRG nuclear power plant is "once in 33,000 reactor years."

The calculations of the Moscow experts do not account for the possibility of an accident as a result of "outside influence" (such as an earthquake or an air crash), or of a major leakage in the plant's primary cooling circuit that cannot be controlled by the emergency cooling system; those would have increased the likelihood of an accident even more. Other factors that might decrease safety were also ignored: the scientists start from the assumption that, technologically, the plant is in good condition and that the operating staff is well trained. As one has learned in the meantime, this does not apply to the four WWER-440 reactors in Kozloduy, which the Bulgarian Government is temporarily shutting down at the urgent request of the West.

Western reactor experts believe that attempts to retrofit the WWER-440 reactors with modern components are doomed to fail. Michael Sailer, of the Darmstadt-based Eco-Institute, told FRANKFURTER RUNDSCHAU that the offer by the Greifswald managers to sell components to the Kozloduy plant can only be described as criminal. The "likelihood" that components vital for safety might "fail" is so great that the attempt to continue operating the reactors on a permanent basis cannot be tolerated.

**WHO Initiates Program on Chernobyl Aftermath**

*LD1507211191 Moscow TASS International Service  
in Russian 1240 GMT 15 Jul 91*

[By TASS correspondent Eleonora Sytotskaya]

[Text] Moscow, 15 Jul (TASS)—The World Health Organization (WHO) is setting out to implement in the USSR the international program on the medical effects of the Chernobyl accident. An agreement on this was signed in Moscow today by Hiroshi Nakajima, WHO director-general, and USSR Health Minister Igor Denisov.

The setting up of an international center for radiation and medical problems will mark the beginning of the program. Its coordinating council will be situated in Obninsk near Moscow based at the authoritative Soviet Institute for Medical Radiology, where the Chernobyl problems are being seriously studied. It has been decided to open three regional branches of the center in the zones which were most affected by the terrible disaster, namely in Kiev (the Ukraine), Gomel (Belorussia), and Bryansk (Russia).

Scientists from different countries, who will come to work at the center, will conduct large-scale scientific research work. Four immediate projects were outlined. They deal with the problems of hematology, an epidemiological register, the reactions of the thyroid gland to the effects of radiation factors, and intrauterine damage to the fetal cerebrum. New information will become the basis for efficient methods for the prevention and treatment of those affected by the Chernobyl disaster.

The first contribution to the implementation of the program has already been made by the Government of Japan, which allocated \$20 million for this.

Hiroshi Nakajima has been in the USSR since last Wednesday. During this time he visited the rayons in the Ukraine, Belorussia, and Russia, where the Chernobyl aftermath is especially vivid. In his opinion it is not a disaster for the Soviet people alone. This is a global problem and mankind must fight it together. Information on medical effects of this accident will help the international community to improve its readiness for emergency situations, he believes.

Igor Denisov highly praised the importance of starting scientific research work under the aegis of the WHO. "Coordination of international efforts will produce answers to many questions and, we hope, it will help to reduce to a minimum the effects of the Chernobyl accident, which are harmful to the health of people," he told the TASS correspondent. "Now the Soviet register comprises information on more than 500,000 adults and children, who in one way or another experienced the effects of that catastrophe. It is not just the question of the USSR, mankind needs realistic programs for assessing the danger of radiation effects, and the work of the center will promote this," he noted.

**Baku Conference Examines Impact of Human Activity on Seismic Stability**

*PM0307155791 Moscow PRAVDA in Russian 2 Jul 91  
Second Edition p 6*

[Correspondent Z. Kadymbekov report: "Earthquake to Order?"]

[Text] Baku—How far does human industrial activity affect seismicity far below the earth's surface? Can outside interference in nature's "internal affairs" cause an earthquake? An international conference held in Baku by the USSR Academy of Sciences Institute of Earth Physics and the Azerbaijan Academy of Sciences Geology Institute was devoted to discussing these topical problems. Prominent seismologists from India, Czechoslovakia, and the Soviet Union took part.

The reports delivered at the conference and researchers' statements enable us to presuppose and, in some cases to assert, that increases in seismic activity are the result of human economic activity. In particular, a disturbance may occur deep within the earth as a result of the construction of large dams and artificial reservoirs, and also the injection of liquid into deep boreholes. Some shifts in the earth's crust may also be brought about by underground nuclear explosions, drastic fluctuations in the water level in enclosed reservoirs, and certain other things that have a direct or indirect effect on the seismic situation.

"An increase in seismic activity is due in some cases," prominent Indian scientist Doctor Kharsh Gupta claimed, "to the creation of large reservoirs. Subsidence in the base of these reservoirs under the weight of the water causes movement in the earth's crust and successive—sometimes weak and sometimes quite strong—seismic tremors. In the sixties devastating earthquakes took place near three large dams—Kariba (Zambia), Kremaston (Greece), and Koyna (India). Yet they are all in regions that are consistently calm seismically—which is evidence of a link between earthquakes and the presence of large dams in a vicinity, moreover predominantly of the kind of dams in which abrupt jumps in the water level are recorded. These phenomena have been confirmed on a number of occasions in the past, as illustrated by the studies carried out by a special UNESCO working group that has been carrying out scientific development work in this field for more than 20 years now."

The hypothesis that underground nuclear explosions cause disturbances deep within the earth also arouses great interest. In particular, the ill-famed test range in Semipalatinsk is not least to blame for the increase in seismicity in the Caucasus and Central Asia, in the opinion of Corresponding Member of the USSR Academy of Sciences A. Nikolayev and Doctor of Physical and Mathematical Sciences I. Kerimov.

Hypotheses that amateurs regard as sensational and fantastic at first glance are, in the scientists' view, quite



logical and feasible. I. Kerimov voiced the following idea: The massive bombings in the Persian Gulf area may have sparked off the earthquake in Georgia. They, as it were, speeded up a process taking place in the depths of the Caucasus mountains.

"At the same time, with the beginning of the all-out air raids on Iraq," a scientist said, "the Geology Institute's sensitive instruments recorded clear changes in noise deep down in the earth, moreover the nature of the signals attested quite definitely to the artificial source of the disturbance. The instruments continued to receive these signals even after the air raids on Iraqi cities had come to an end."

But why Georgia, thousands of kilometers from the theater of combat operations? In the scientist's opinion, the process whereby powerful underground vibrations are "prepared" in this zone took its natural course with a tendency to increase, and seismic waves from the bombing runs only incited and speeded it up. On the principle that a chain is only as strong as its weakest link. It is not impossible that for the same reason there may be earthquakes over the next six or eight months in existing seats of tension in Iraq, Turkey, western Iran, and adjacent areas which could later bring about more intensive events and a series of earthquakes, since scientists believe that the earthquakes themselves may also cause fresh underground tremors.

The study and forecasting of increased seismic activity is one of the main problems that science has brought forward in the era of accelerated technical progress.

#### **International Baltic Ecology Institute To Be Set Up in Leningrad**

PM0307105791 Moscow ROSSIYSKAYA GAZETA  
in Russian 29 Jun 91 p 2

[Unattributed report under "The Government Has Resolved" rubric: "Saving the Baltic"]

[Text] The RSFSR Council of Ministers has adopted a resolution: "On Establishing the 'Man and the Sea' International Scientific and Study Complex in Leningrad."

The aim of the complex is to develop scientific research in the Baltic Sea area and to monitor its ecology. The organization heading the new international complex will be the Scientific Research and Design Technology Institute of Biological Systems at the Leningrad Institute of Electrical Engineering. It will receive 350,000 rubles to carry out scientific research.

But it is the Leningrad City Soviet Executive Committee that will have to take care of housing the "Man and the Sea" complex in the city and providing buildings and installations for it.

#### **Beijing To Host International Congress on Global Environment**

OW1607125991 Beijing XINHUA in English  
1120 GMT 16 Jul 91

[Text] Beijing, July 16 (XINHUA)—About 1,000 scientists from 47 countries will gather here early next month to discuss the earth's environment and provide a scientific basis for forecasting and improving the global environment.

The 13th Congress of the International Union for Quaternary Research with the theme: Humans and Global Change During the Quaternary, will be held from August 2 to 9 at the Beijing International Convention Center.

Quaternary research is the study of the evolution process and developing trend of the earth environment in which man has been living and evolving over the past two million years. China's major landscapes, such as the Loess Plateau, the Qinghai-Tibetan Plateau, the red earth regions of southern China, karst topography, and salt lakes have been formed during this geological period.

Speaking at a press conference here today, Professor Liu Dongsheng, a member of the Chinese Academy of Sciences and president of the organizing committee of the congress, said that the problems to be discussed at the meeting are of great concern to the governments and people of many countries. "The environment of the present day is the product of the evolution of the past environment. The past is the key to predicting the future environment for human development and survival," he said.

According to Liu, the geological conference is expected to be the greatest international gathering ever hosted by the Chinese Academy of Sciences. Chinese Vice-Premier Yao Yilin will be the honorary president of the congress.

During the meeting, the South-South Cooperation Fund of the Chinese Academy of Sciences will open a special seminar for young scholars and university students from Third World countries. A field excursion will be organized to enable the participants to study the geological, ecological, anthropological and archaeological monuments and landmarks in the Qinghai-Tibetan Plateau, the Tianshan Mountains and the Yellow River Valley.

#### **International Seminar on 'Human Ecology' Opens in Hanoi**

BK1107153891 Hanoi VNA in English 1415 GMT  
11 Jul 91

[Text] Hanoi VNA July 11—An international seminar on human ecology opened here this morning with the participation of nearly 100 Vietnamese researchers and 17 foreign ecologists from the United States, Thailand, the Philippines, Indonesia and Laos.

The seminar, jointly sponsored by the Natural Resources and Environment Center of the Hanoi University, the

U.S. East-West Center and the Southeast Asian Universities Agroecosystem Network- Suan, will sit for three days.

Also present are representatives of the International Union for Conservation of Nature (IUCN), UNDP [United Nations Development Program], SIDA [Swedish International Development Agency], Oxfam [Oxford Committee for Famine Relief], UNFPA [United Nations Fund for Population Activities], FAO [Food and Agriculture Organization] and the Australian Embassy in Vietnam.

The seminar is a good opportunity for Vietnamese ecologists to exchange with their foreign colleagues concepts and methodologies of human ecology in order to deepen their knowledge of the natural resources and the environment and promote sustainable rural development in Southeast Asia in general and in Vietnam in particular.

Among the more than 20 papers presented at the seminar, many dealt with common problems of human ecology such as "Introduction to Human Ecology" and "Man and Biodiversity". Others dealt specifically with the human ecology in Vietnam such as "consequences of the Traditional Agroecosystem of the Vietnamese people", "Nature, Man and Agriculture of Vietnam" and "Mutual Aid Tradition in Rural Communities of Vietnam", etc.

### **Germany, Indonesia Agree to Environmental Cooperation**

*LD0707125291 Hamburg DPA in German 1228 GMT 7 Jul 91*

[Text] Bonn/Mainz (DPA)—Close cooperation on the environment, particularly in the area of protecting the forests, has been agreed on between the Federal Republic and Indonesia, a significant tropical rain forest country, on the occasion of the state visit of President Suharto. Protecting and preserving the forests is a joint task for the industrial and developing countries, the federal press office stressed today.

A joint declaration by both governments says that the industrial countries must undertake increased efforts in the area of air pollution. They must also support third world countries with extra financial and technical aid "to make their contribution to global environmental protection." The bilateral talks had an eye to the UN Conference on the Environment and Development to be held in Brazil in 1992, which will create the prerequisites for an international agreement on the protection and continuing management of forests.

Suharto ended his four-day visit to the Federal Republic today with a visit to Mainz, followed by a trip on the Rhine to Koblenz. The president intends to fly back to Jakarta this evening. The Greens in Rhineland-Palatinate criticized the visit because Suharto governs his country by torture and executions.

### **Pacific Environment Meeting Emphasizes Climatic Change Issues**

*BK0907122891 Hong Kong AFP in English 1030 GMT 9 Jul 91*

[Text] Noumea, July 9 (AFP)—A South Pacific Regional Environment Programme (SPREP) meeting closed here Tuesday with a call for international measures to address climatic change and other environmental issues.

A declaration at the end of SPREP's fourth meeting said the international community should "adopt measures favouring protection of the planetary environment with particular emphasis on management of climatic change."

More than 150 delegates from the South Pacific, Australia, New Zealand, France and the United States attended the week-long SPREP conference, which opened July 3.

Delegates stressed the threat of rising sea levels caused by global warming that some say could eventually submerge low-lying island states in the South Pacific, as well as protection of coral reefs, the dangers of dumping dangerous substances and sea pollution.

Major environmental groups such as Greenpeace and the Worldwide Fund for Nature attended as observers.

The international community should support efforts "aimed at a better understanding of world climatology" while "respecting the right of (South Pacific residents), as guardians of a fragile environment, to protect the region," the declaration said.

It also called for fishing techniques that will ensure sustainable yields, "preservation of biological diversity and protection of the marine environment from all sources of pollution."

The declaration is to serve as SPREP's working position during a United Nations conference on the environment scheduled for next year in Brazil.

The ministers, whose meeting followed a session of top officials from SPREP member countries, also ratified a decision to move SPREP headquarters from the New Caledonian capital to Western Samoa.

After a transition period, SPREP is to become an independent body responsible for managing a five-year plan to promote protection of the South Pacific environment.

### **South Pacific Countries To Hold Meeting on Environment**

*BK0207093091 Melbourne Radio Australia in English 0500 GMT 2 Jul 91*

[Text] Over 150 Pacific ministers and senior officials are meeting in New Caledonia to decide the future of the South Pacific Regional Environment Program (SPREP). Radio Australia's South Pacific correspondent, Arena Renden, says the meeting will approve an autonomous

status for the program, making it equivalent to other regional organizations such as the South Pacific Commission and the Forum Fisheries Agency, but our correspondent says it will require more financial commitment from member countries who have not increased contributions since the setting up of SPREP in 1982.

The program's director, (Willi Fauva), is making SPREP a separate regional body. He said it will give greater impetus to environment activities in the Pacific region. The New Caledonia meeting will also consider the relocation of SPREP which is currently housed with the South Pacific Commission in Noumea.

Our correspondent says Western Samoa, Vanuatu, or the Cook Islands are being considered as alternative sites for the organization. Ministers will also sign a declaration on the environment and a statement which will be taken to the United Nations conference on environment and development in Brazil in 1992.

#### **Belize Hosts Caribbean's First Conference on Eco-Tourism**

FL0907132691 Bridgetown CANA in English  
1256 GMT 9 Jul 91

[Text] Belize City, Belize, July 9, CANA—International tourism planners gathered here Tuesday for the start of the Caribbean's first conference on eco-tourism, organized by the Belize Government and the Caribbean Tourism Organisation (CTO) with funding from the European Community.

Belize's director of tourism, Joy Vernon, said 150 international delegates from the Caribbean, the United States, the United Kingdom, and Germany will be attending, plus 100 local people including hoteliers, tour operators, and educators.

CTO chairman, Dominica's Tourism Minister Charles Maynard, was to be the keynote speaker at the opening ceremony at the newly opened Biltmore Plaza Hotel. Belizean Government Minister Glenn Godfrey, who holds the joint portfolio of tourism and the environment as a recognition of the connection between them, said he hoped the conference would stimulate interest in Belize as an eco-tourist destination.

"It's a matter of educating people, both ours and in the rest of the Caribbean about the benefits of eco-tourism," he said.

Godfrey said he is hoping the conference will bring about a greater sensitivity locally and regionally to eco-tourism.

"We want to project an image of the type of product we have to offer and we want to show our brothers in the Caribbean what we have to offer. Every country has some natural aspect and as long as we don't get too greedy and start to expand too rapidly, I think the future is bright."

The conference will look at how the Caribbean can capitalise on eco-tourism which is a rapidly expanding sector of the market as more and more people become interested in getting back to nature. The organisers said they hope the four-day conference will put eco-tourism on the "front burner" and encourage more countries to consider developing and promoting it.

Seminars led by international speakers will look at eco-tourism and the law, developing travel programmes for eco-tourists and conservation, and utilisation of natural areas. The delegates, who include travel agents, tour operators, and wholesalers as well as environmentalists and government officials, will work in small groups and prepare recommendations and report their conclusions at the end of the conference.

Belizean speakers will illustrate how they have managed to promote eco-tourism by bringing in environmental protection laws and attracting international financing. Godfrey said eco-tourists were not just interested in plants and animals. "They are also interested in people, and so we are trying for cultural awareness and preservation as well." Answering criticisms that Belize has created a lot of environmental laws for the protection of its rainforests and barrier reef, but had done little to police it, Godfrey said the problem was one of having a small population.

"We don't have the adequate resources to do the policing and that is why we rely on international participation in our efforts to protect the environment," he said.

Tourism in Belize is now second only to agriculture as a foreign exchange earner. Godfrey said he is hoping for a 15 per cent a year rise in the number of tourists.



## GHANA

### National Committee To Control Industrial, Consumer Chemicals Established

91WN0552A Accra PEOPLE'S DAILY GRAPHIC in English 1 May 91 p 1

[Article by Victoria Odoi]

[Excerpt] The Environmental Protection Council has set up a National Committee on Industrial and Consumer Chemicals which is to institute general procedures for the control and regulation of chemicals.

The committee is also to monitor and research the effects of these chemicals on health and the environment.

These statements were contained in an address read on behalf of Ms. Franciska Issaka, deputy secretary for Local Government and acting executive chairman of the Environmental Protection Council, by Professor C. Dorm-Adzobu, program director for the Environmental Protection Council, at a day-long seminar titled: "Management of Chemicals, Their Hazards, and Environmental Management Plans" held in Accra yesterday.

The appointment of the committee forms part of the measures being adopted in Ghana to cooperate with the international community to prevent the dumping of dangerous chemicals in the country.

Ms. Issaka said the committee is compiling a national register of chemicals and is also considering drafting national legislation on chemicals which will cover all industrial and agro-chemicals.

The Deputy Secretary also said work on the pesticide law has reached an advanced stage.

She explained that following an Environmental Protection Council directive in June 1990 aimed at regulating and controlling the importation, distribution and use of chemicals in the country, 174 companies, industries and individuals have so far applied for registration as chemical importers. [passage omitted]

## MOZAMBIQUE

### Environmental Awareness Campaign Launched

#### Campaign Begins

91WN0358A Maputo NOTICIAS in Portuguese 3 Jun 91 p 3

[Text] Today the slogan, "Greenhouse Effect," marks the beginning throughout the country of activities commemorating Environment Week [SMA], which also coincides with the launching of a national campaign designed to make people aware of environmental problems. The scheduling of the SMA and the campaign, lasting 13 weeks, is aimed essentially at increasing the

people's interest in the preservation of our existing natural resources through clarification sessions on the importance of this act of preservation, among other educational measures.

This information was given last Friday in Maputo by Bernardo Pedro Ferraz, director of the Environmental Division [DMA] of the National Physical Planning Institute [INPF], who, on this occasion, pointed out that our country has environmental problems exacerbated by the lack of national awareness of the existence of superficial knowledge.

He added that it was with the aim of providing people with this information that the organization associated with the environment decided to hold a series of educational meetings, either during the commemorative week itself or during the campaign, emphasizing that the task of the environmentalists is not only to preserve the natural resources but also to make people aware of the problem in general.

On this occasion, the director of INPF's DMA said that the action to be taken by the various countries is aimed at preparing an international conference to be held next year in Brazil; he also said that executive committees have been instituted and that our country has been given the responsibility of the vice presidency.

In view of that action, the director said that it behooves our country to provide an example by engaging in a number of activities aimed at environmental preservation; this would be in addition to the assignment given to Mozambique to watch over the area's hydraulic resources.

In this regard, the director of INPF's DMA said that plans are being made in the near future to initiate a program of coastal administration which, according to him, should be of serious concern to our country, since this is the site of some of the area's major resources.

The aforementioned program, which is based partly on UN assistance and partly on that of Norad [Norwegian Development Agency], will in an initial phase be implemented in Mecufi, in Cabo Delgado Province, whence a number of DMA missions have already journeyed to take up technical and even logistical matters.

However, according to Bernardo Pedro Ferraz, priority will be given to training, a process which is now encountering certain difficulties in obtaining scholarships inasmuch as there is no shortage of interested individuals.

With regard to the SMA, whose World Day is scheduled for next Wednesday, a clarification meeting is to be held today on the importance of this date and on the attitude of the sector's workers; this is in addition to a conference to be held in Radio Mozambique's auditory studios on the subject: "Social Communication, Environment, and Development."

The realization of those activities, which are expected to include the participation of environmental agents, representatives of the Manyanga Nucleus [NM], and other guests, is also in keeping with the campaign designed to make the people aware of environmental problems.

### Experts Hold Seminar

91WN0358B Maputo NOTICIAS in Portuguese  
5 Jun 91 p 8

[Text] At the beginning of the week in Maputo, experts from the Environmental Division [DMA] of the National Physical Planning Institute [INPF], journalists, and other individuals, directly or indirectly associated with this field, pointed out the need to create a national environmental awareness aimed at assuring the preservation of the existing natural resources. They supported this position at an informal discussion held at the studios of Radio Mozambique on the subject: "Social Communication, Environment, and Development"; this was on the occasion of the commemoration of Environment Week [SMA] with special emphasis on World Day to be celebrated tomorrow.

According to what the experts said, an effort should be made to coordinate the activities of the various organizations connected with the investigation of environmental problems with the national news media, for there can be no development without communication nor any development without protecting the environment, both of which are dependent on information; and the preservation of our natural resources depends on the attitude of every citizen and his corresponding awareness.

Previously, biologist Mia Couto, member of INPF, pointed out that, at this time, there is no information in the country about the environment and that this situation is not due to the news media but, rather, to a lack of detailed information, particularly by the sector's qualified people.

As an example, Mia Couto pointed out that Mozambique is in fifth place among the 10 countries covered by the statute but that this has not been fully dealt with by the national news media, since there were virtually no environmental problems in the country.

She stressed that in nearly all of the countries affected by the rise in the sea level resulting from the warming of the earth, action was taken to prevent catastrophic situations but that this did not happen in Mozambique.

She added that the impression now prevalent in the country is that the environmental question dealing with the preservation of animal species is scarcely of interest or concern to most people and that, for this reason, there is virtually no law elucidating that situation.

However, according to the biologist, that is not true, for, if appropriate measures are not taken to remedy this situation, within a few years we could end up with

catastrophic situations which we would consider a natural calamity, "when it is not a natural calamity but, rather, one which we have caused."

She also considered that only a coordinated effort among the news media and research institutes on environmental questions could help obviate these situations through the people's awareness of the need to preserve our natural resources.

This position was also supported by Manuel Tome and Botelho Moniz, general managers, respectively, of Radio Mozambique and Experimental Television, and other speakers in the chat among experts of INPF's DMA and those at Eduardo Mondlane University.

In their speeches at the seminar, those experts not only brought up environmental problems but also sought ways to create a national awareness on this subject, stressing that this is possible only through the informal training of the individuals involved and the introduction of an environmental discipline in the schools, particularly in high school.

With regard to informal training, Manuel Tome said that the RM must play a predominant role not only in covering most of the national territory but also in transmitting its messages through other national languages.

On this occasion, Manuel Tome pointed out that there is a spirit of sensitivity among news professionals on environmental questions but that there is still a lack of in-depth awareness on this subject; he said that a concerted effort is being made by organizations associated with the environment and news media to arrange small courses and seminars.

Again with regard to the people's awareness of environmental problems, another speaker said that at a time when our country is about to take part in the multiparty system, the news media should play a predominant role in inducing various political parties to pay special attention to their programs and environmental questions, this being one of the ways to avoid the deterioration of living conditions in the country.

Meanwhile, just last Monday the INPF's DMA held a clarification seminar on the importance of the date marking that celebration and pointing out the effort being made by the sector's workers on a day-to-day basis.

Yesterday, following the activities commemorating the week which will extend until Saturday, members of the environmental unit of the Manyanga Nucleus [NM] and other individuals interested in this subject held a work and awareness session at the Texlom Factory in Matola; and today there is to be a meeting on practical activities in Peace Park, designed to improve the environment and plant 120 shade trees.

Scheduled to begin at 0800 hours, this activity will be conducted and carried out by environmental representatives and a number of Mozambican Government officials and employees.

## SOUTH AFRICA

### Results of Study on National Waste Management, Pollution Control Released

91WN0545A Johannesburg *FINANCIAL MAIL*  
in English 24 May 91 p 90

[Article by Brendan Ryan]

[Text] An unmistakable sign of the onset of the Highveld winter is the brown shroud that hangs over Johannesburg and much of the Vaal Triangle in the early mornings.

It's an appropriate time for the Council on Scientific and Industrial Research (CSIR) to make public its most intensive study on pollution so far: "The Situation of Waste Management and Pollution Control in South Africa," commissioned by the Department of Environmental Affairs.

Among a number of hard-hitting findings, the CSIR objects to the confidentiality surrounding the present system of air pollution control and the lack of legislated ambient general air quality standards. It wants major changes in the way the controlling department, the Chief Air Pollution Control Office (Capco), is run.

What standards should be introduced and the economic costs of meeting them are topics worth studies in themselves, according to Petro Terblance, chief medical researcher for the Medical Research Council (MRC). "You've got to be pragmatic. U. S. air standards are very conservative and set to protect the health of the most sensitive individuals."

The MRC is co-ordinating a programme to monitor air quality in Sasolburg, Vereeniging, Vanderbijlpark and Sharpeville. It will soon add Edenvale and Kempton Park to the project which is sponsored by the Department of Health and companies like Eskom, AECL, Sasol, Iscor, EMSA, NCP and SAA.

Initial work carried out by the MRC points a finger at arguably the major source of sulphur and total suspended particulates (TSP) pollution in residential areas—coal smoke from the burgeoning black townships and squatter camps. This is no respecter of municipal boundaries and controlling it poses a serious problem to the practical enforcement of general ambient air standards.

Measuring the pollution to which a small sample of schoolchildren in the suburbs of Vereeniging and Sebokeng were exposed over a 12-hour period revealed 23 percent of the Vereeniging sample exceeded the limit of 260 mg/m<sup>3</sup> of TSP compared with 100 percent of the

Sebokeng sample. Some of the Sebokeng children were exposed to four times the limit which is a U.S. standard.

The reason is the coal stoves used in almost all black homes. There is an intense debate under way in which Eskom argues that, instead of it being forced to spend about R6.5bn on cutting its sulphur emissions, the money should be used to electrify the townships.

The CSIR study suggests it won't be that simple. There are about 2m stoves in use, increasing at a rate of about 40,000 a year. Bought on HP over 24 months, each stove represents an investment of about R5,000. The CSIR reckons any stoves displaced will be sold to someone else—most likely the squatters flocking to cities and now burning coal in oil cans.

A better solution would be to follow the European example and develop a cheap, smokeless fuel for coal stoves to replace the low-grade coal being used now.

A gloomy situation painted by some experts is that, while heavy industry is spending between R200m-R300m a year on pollution control equipment, this is undermined by blacks spending about the same on new coal stoves.

Ruling legislation—the Atmospheric Pollution Prevention Act (45 of 1965)—aims at controlling pollution at source through a concept known as the Best Practicable Means which Capco says is the most appropriate option, "provided a few minor shortcomings be corrected."

An example of a major industry often cited for causing air pollution is Highveld Steel & Vanadium but the group maintains it is working to acceptable standards.

It spends R35m in operating costs—mainly electricity charges—annually on its air pollution equipment which has a replacement capital value of R260m. MD Trevor Jones says the installed plant works to acceptable cleaning standards and reduces stack particle emissions to 150 mg/m<sup>3</sup> "of air which still shows as a visible plume of smoke." Surprisingly, Jones says Hiveld does not measure directly what is still going out of its stacks but the condition of the cleaning plant is monitored daily.

The CSIR acknowledges the permit and Best Practical Means system has been effective in preventing major degradation but says it may fail to bring about major desired improvements in air pollution. The CSIR appears concerned that Capco may have too cosy a relationship with the industries it is supposed to be controlling.

The report says it appears there has never been a prosecution for air pollution. It adds that while air pollution is best controlled as close as possible to source, ambient air standards are required by which to judge success or failure.

The CSIR finds it unacceptable that the Best Practical Means standards are variable and entirely dependent on



the subjective evaluation of Capco. Also, Capco is undermanned with eight inspectors to cover the whole country though about 2,000 permits for noxious and offensive gases have been issued.

Capco rejects the cosiness charge by saying the success of air pollution abatement cannot be judged by the number of prosecutions but by progress made through close liaison between the control authority and industry.

"Industrial emissions in areas like Witbank, Pretoria, the Vaal Triangle and Cape Town have progressively been reduced by a policy of realistic goals and the cost effective use of funds for abatement rather than expensive litigation," Capco says.

It adds that its system of issuing a notice to an offender, demanding compliance with pollution regulations or face closure, has been effective. Only two factories have had to be prosecuted. Capco concedes manpower is a problem but says all major industrial sources have stack monitors and the results are checked. Hiveld, for one, does not. Which others don't?

Capco maintains it carries out extensive ambient monitoring showing pollution levels are dropping and within acceptable standards. Tell that to anyone having seen, and smelt, what the Witbank, southern Johannesburg and other Highveld industrial areas are like on a winter's morning.

Penalties are laughable with the fine for a first air pollution offence set at a maximum R500. These should be jacked up to realistic levels. That will make smaller firms think twice about chancing their arm but, whether the fine is R5,000 or R50,000, these amounts are still no financial deterrent to the giant industrial undertakings.

Public pressure is a good way to get at them, by hitting their corporate profiles, and better still is peer pressure. That's why organisations like the Eastern Transvaal Highveld Air Pollution Liaison Committee are valuable—its members include the major polluting industries in the area.

Capco's views on co-operation versus confrontation are entirely understandable. Corporate executives often have a knee-jerk reaction to heavy outside criticism. A balanced, reasonable approach is usually far more successful but, if nothing happens because of corporate inertia or an unreasonable resistance to change, legal action and associated publicity should be applied without delay.

Capco should publicise the issuing of notices to offenders. The watchdog should be seen using its teeth.

#### **Communist Party Views Environmental Issues**

91WN0523A Cape Town WEEKEND ARGUS  
in English 25 May 91 p 17

[Interview with SACP's Garth Strachan, Western Cape working group, by Farieda Khan of the Department of Environmental and Geographical Science]

[Text] Growing public concern on environmental issues has attracted the attention of many organizations. Both the African National Congress and the Pan Africanist Congress recently released discussion documents outlining their stance on the question. Thus far, however, little has been heard from the South African Communist Party [SACP] as to its position on the environment. To gain a clearer understanding of the SACP's approach, Farieda Khan, of the Department of Environmental and Geographical Science, spoke to Garth Strachan of the Western Cape region's working group.

[Khan] *Does the SACP have an environmental policy?*

[Strachan] We don't have, at this point, a fully articulated environment policy.

[Khan] *What are the reasons for this?*

[Strachan] We are emerging from 40 years of underground struggle in which the first priority was obviously the destruction of apartheid. Our priorities at this point are to rebuild our legal structures. But in so doing we obviously have to pay attention to the future democratic transformation of South Africa and its long-term socialist transformation.

[Khan] *Are there any future plans to formulate an environmental policy?*

[Strachan] As of July, which will be our 70th anniversary, the Communist Party will be drafting a new programme for the present phase of struggle. This will obviously include an environment policy and lead up to the adoption of a strategic programme for the transformation of South Africa at our December conference.

[Khan] *Which environmental issues do you regard as especially relevant within the South African context?*

[Strachan] I can't pre-empt the environmental policy, which still has to be widely discussed prior to its adoption.

However, the guiding principles for the adoption of such a policy are:

Firstly, we clearly have to protect our environment for future generations.

Secondly, the racial and capitalist systems of government have done very little to protect our environment. The extent of environmental degradation here has, apparently, been one of the worst in the world. That environmental degradation has been for the benefit and material gain of the small white section of our population and to the cost of the overwhelming majority of South Africans who suffer from the most appalling environment and living conditions. The townships themselves are blights on the environment, not to mention the conditions that our working class must work under. Those are some of the principles and perspectives which would guide the adoption of SACP policy.

[Khan] *You say that the greed underlying capitalism has led to massive environmental degradation in South Africa and elsewhere. Surely, in the light of the growing evidence of the massive extent of the environmental degradation which has taken place in Eastern European countries, this is a somewhat short-sighted view?*

[Strachan] It is clear that capitalism alone hasn't been responsible for the degradation of the world's natural environment. However, we need to blame capitalism. First and foremost, capitalism as a system is guilty of the rape of our natural environment—there are so many examples of that. But we also need to accept that...the Soviet Union in particular has been guilty of serious, perhaps even criminal neglect of environmental questions in Eastern Europe. Those of us in South Africa who support socialism need to examine the very serious errors made in socialist countries regarding economic planning in order to be able not only to compete economically with capitalism, but to compete in a way which serves the interests of the working people—including through adequate protection of the natural environment.

Having said all that, we are still convinced that socialism and a socialist economic reconstruction of our society *does* have the possibilities for the protection of the environment and that the serious errors of the socialist countries were a distortion of the fundamental democratic character of socialism which led them to making the kind of mistakes they made.

[Khan] *In undertaking post-apartheid economic reconstruction and in attempting to redress historical inequalities, don't you think that South Africa will face similar problems with regard to the effect that unrestrained industrialisation and development could have on the environment and natural resources?*

[Strachan] Clearly, in efforts to democratise and reconstruct our society, economic restructuring is going to be primary—an economic reconstruction which doesn't only serve the interests of a few but will begin to actually address the very serious imbalances which a century of capitalism and exploitation have brought to us. That's going to be a massive and long-term programme. We have obviously been left a legacy of a terribly lopsided and one-sided economy and in attempting to restructure, there will obviously be a temptation to answer the immediate material needs of the massively underprivileged and exploited section of our population. Clearly there will have to be a very careful balance. It should be realised that the restructuring and development of the economy which serves the short-term interests of the mass of our people through environmental degradation, leads to the long-term suffering of our people and therefore will be counter-productive.

[Khan] *How do you see the future role of the SACP within the environmental arena? For example, is your organisation amenable to liaison with mainstream environmental organisations?*

[Strachan] The SACP would very much like to develop strong working relationships with all democratic organisations in civil society. One of the mistakes in Eastern Europe was that the Communist Party failed to recognise the necessity of establishing a role for itself in civil society. We would like to see a dynamic and active civil society which would not only *not* exclude a multiplicity of organisations, but would actively seek to encourage them.

We would like to see the development of a much stronger environmental lobby in South Africa, with independent positions and constituencies. We would hope we could develop a strong working relationship with such organisations.

### **Business, Industry Grapple With Environmental Policy**

91WN0545B Johannesburg THE WEEKLY MAIL  
in English 24-29 May 91 p 6

[Text] In the present economic climate antipollution efforts are seen by industry as punitive measures. Eddie Koch looks at an alternative, which seeks sustainable development for businesses.

There are two truisms on the horizon that do not bode well for the future of South Africa's environment. Political reform, floundering on the rocks of zero growth, demands economic development at all costs. Unemployment has so devastated the social landscape that factories, even the most filthy, will have to stay open.

This is the classical conundrum faced by third world countries. As African ecologist Mohamed Suliman put it on a recent visit to this country: "The north...is now mainly concerned about the environment. Developing countries are concerned about development, less about the environment."

Only in South Africa the dilemma is made more acute by the burning political imperatives for growth.

Heavyweight futures analysts connected to Nedcor and Old Mutual's study of the political and economic scenario for South Africa say economic stagnation is the single factor that distinguished this country from others that have successfully reformed themselves.

Until recently most environmentalists have argued vociferously for government regulations that will restrict industry's ability to pollute...and grow.

"Polluter pays," an approach which involves the imposition of stiff fines on industries that contaminate our air, rivers and soil, has become the watch-word for local Green activists—ranging from members of Earthlife Africa on the left to some officials in the government's Environment Department.

Such calls for a punitive approach to irresponsible industrialists are bound to escalate in the wake of the Council for Scientific and Industrial Research's recent report

which notes that government departments are hopelessly ineffective in containing industrial pollution.

It points out that of the 300-million tons of solid waste dumped in South Africa each year, 238-million tons are from the mines. It notes Eskom's latest power station at Lethabo in the Vaal Triangle produces as much fly-ash as the whole of France.

But speak to industrialists, economists and trade unionists—many of them are all looking for creative ways around the looming clash between the need for growth and the quest for a healthy environment—and most will, at least privately, doubt whether South Africa's future can afford the luxury of regulations to restrict industrial pollution.

But a way out of this quandary is being formulated by the Business Council for Sustainable Development (BCSD), set up by leading international industrialists to advise the United Nations Conference on Environment and Development due to be held in Brazil in 1992.

The BCSD's approach involves the creation of financial incentives for firms that encourage sustainable economic activity rather than restrictive regulations for industry—and one of its senior officials will be visiting South Africa to promote these ideas next month.

Headed by Swiss industrialist Stephan Schmidheiny, the council is pioneering a less punitive style that could remove much of the conflict between economists and ecologists.

The approach manages, at least in theory, to combine minimal regulation of the economy with effective management of the environment.

"Unlike the traditional defensive approach taken by environmental protection regulations, which puts a host of restrictions on industry, sustainable development offers a positive challenge to business," says a position paper developed by the BCSD.

"The challenge is to devise ways of economic development that can allow growth to continue over time without destroying the natural resource base. In straightforward business terms, it means generating the maximum income from a given stock of assets without depleting the capital base."

Dr. Ernst Brugger, a representative for the council, will be visiting South Africa in July and will use the opportunity to put his views to local industrialists.

The council, made up of 50 leading industrialists with one in every three members from the developing world, is also planning a conference in Zimbabwe for July where government and business officials will meet to discuss sustainable business practises for the Southern Africa region.

The BCSD position paper points out that environmental protection has traditionally involved a variety of rules

and bans of all kinds that have thrust ecologists and business into confrontation.

"With the new concept of sustainable development, government must no longer concentrate on restrictive regulations alone. Instead it must develop a legal framework which changes the rules of the market to give financial incentives to sustainable industrial activity," it says.

Methods whereby this can be achieved include:

- Market strategies and tax systems which will ensure that innovative companies and industries which meet the criteria for sustainable development can grow and profit.
- Ensuring that the full value of the environment is reflected in the prices on which businessmen and consumers make their choices in the marketplace.
- Making business operations and profit levels dependent on satisfying the growing body of public opinion that is becoming increasingly sensitive to environment crisis.
- Encouraging employees to value working in plants that have responsible approaches to the environment.
- Making investors aware that ecological demands do not necessarily involve squeezing profits.

"This is a direct result of the failure to incorporate environmental costs into the financial decision-making process. However, investors are now learning that sustainable development means sustaining long-term profit potential."

The ideas, and Brugger's visit, come at a time when organised business and labour are devoting sustained attention to the question of growth and environmental protection.

Nedbank recently organised a panel discussion that dealt with the need for big business to, in Anglo director Clem Sunter's words, "balance economic development, political needs and conservation of the environment in South Africa."

The South African Chamber of Business (Sacob) this year submitted detailed proposals to the President's Council about how this could be implemented.

Trade unionists have begun to explore the link between health and safety in the workplace and environmental health. "We believe that by campaigning to protect workers from dangers in the factories, we will be able to prevent industrial waste from contaminating the air and water," says Shirley Miller, information officer for the Chemical Workers' Industrial Union.

And at a recent seminar hosted by the union, some of the ideas contained in the BCSD paper, were already being enunciated.

"The question should not be posed as one that equates controls on pollution with loss of jobs," says Miller. "Our approach is to argue that the cleaning up of



industry can, in fact, create jobs. There are numerous examples from Europe and America which indicate how this can be done."

She is the first to admit that such ideas do not offer a panacea to all the ills of industrial pollution. But they do form a starting point for those who want to create the precarious balance that is needed between politics, the economy and the environment.

**Drought Disaster Area Spreading in Eastern Cape**

*MB1207190691 Johannesburg SAPA in English  
1822 GMT 12 Jul 91*

[Text] Port Elizabeth July 12 SAPA—The Bedford District in the Eastern Cape has been declared a drought

disaster area, retrospective [as received] to July 1, reports SABC [South African Broadcasting Corporation] radio news.

Bedford will join the districts of Albany, Bathurst, Alexandria, Port Elizabeth, Steytlerville, Jansenville, Aberdeen, Graaff-Reinet, Cradock and Pearston as well as parts of Kirkwood, Uitenhage, Willowmore and Somerset East, which have been on the government drought disaster list for some time.

The public relations officer of the Eastern Cape Agricultural Union, Mr Rory O'Moore, has confirmed that the Sugar Board will decide on Tuesday next week on a possible donation of molasses to farmers in the drought-stricken areas.

**Program for Environmental Protection in 1990s**

91WN0521B Beijing ZHONGGUO HUANJING BAO  
[CHINA ENVIRONMENTAL NEWS] in Chinese  
20 Apr 91 p 1

[Unattributed report: "10-Year Plan and Eighth 5-Year Plan Program Proposes Tasks and Goals for Environmental Protection Work"]

[Text]

**I. The Main Tasks and Major Indices Proposed in the 'Program'**

Strengthen natural resource management and environmental protection, exploit and utilize land, water, forest, pasture, and mineral resources in a cherishing and rational manner, reinforce monitoring and prevention of geological disasters, atmospheric, water, and soil pollution, solid waste, noise and other public hazards, earthquakes, and other natural disasters, control tendencies toward degradation of the natural ecological environment, and make improvements in environmental quality in several key cities and regions.

**II. Regional Economic Development Deployments and Policies in the 'Program' Propose:**

1. Development of new zones or upgrading of old zones in cities should implement the principle of unified planning, rational deployments, adaptation to local conditions, comprehensive development, and matching construction, continue to reinforce construction of urban water supplies and sewers, public communication, pollution control, and other public facilities, and further improve urban functions and environmental quality.

2. Compile a territorial improvement program. Rationally determine the primary functions and deployment of forces of production in key economic development zones and all economic zones.

3. Carry out comprehensive control in a focused manner for major rivers and lakes, continue to revise and complete control programs for the Huang He, Huai He, Zhu Jiang, Liao He, Songhua Jiang, and Hai He-Luan He river basins.

4. Accelerate formulation of overall programs for comprehensive utilization of land, strictly control the occupation of cultivated land by nonagricultural construction, gradually develop reclamation of land suitable for agriculture and beach reclamation, and restore abandoned industrial and mining land. Do better water and soil conservation, strive to increase land fertility, prevent land desertification, and protect forest and grassland vegetation. Actively and stably promote reform of land use systems. Adhere to the principle of the system of socialist public ownership of land, straighten out land economics relationships, start establishing compensated utilization of land resources and mechanisms for rational allocation.

5. Reinforce marine resource surveys, prospecting, and programs for coastal zones, islands, and marine areas, make major efforts to undertake comprehensive development and improvement of the Bohai Sea and major bays and river mouths, reinforce coastal protection and comprehensive coastal management, strengthen development of maritime industry, and increase the comprehensive development benefits from marine areas.

6. Strengthen cartographic activities. Gradually form digitized charting, space measurement, rapid location, and other technical systems and accelerate cartographic work in important strategic regions to provide accurate cartographic guarantees for economic construction and social development.

7. Reinforce construction and management of environmental monitoring systems, build several national environmental monitoring networks and environmental information networks, quickly and accurately gain an understanding of our national environmental quality situation, and try to control the tendency toward growing environmental pollution. Accelerate planning and construction in natural protection regions, build several national-level key natural protection regions, and start to form natural protection zone networks with rational deployments and a full complement of varieties. Focus on controlling atmospheric, water, and solid waste pollution. Further reinforce comprehensive control and natural protection for the urban environment. Strengthen water resource protection. Continue working on environmental protection demonstration projects and ecological agriculture trial points. Focus on pollution prevention and control in township and town enterprises. Control soot discharges to 14 million tons and control industrial particulate discharges to 7 million tons in 1995 and attain an industrial waste gas processing rate of 74 percent and an industrial solid waste comprehensive utilization rate of 33 percent.

**Protection of Coastal, Marine Geological Environment Viewed**

91WN0521A Beijing ZHONGGUO DIZHI [CHINA GEOLOGY] in Chinese No 5, 13 May 91 pp 15-17

[Article by Li Shaowu [2621 4801 2976], Zhang Yecheng [1728 2814 2052], and Zhang Jing [1728 2533]: "The Geological Environment of China's Coastal and Marine Regions Must Be Protected"]

[Text]

1

China is located on the western shore of the Pacific Ocean and has a long coastline and vast marine area. East of the mainland is the Bohai Sea, which covers an area of 7,700 square kms and has an average water depth of 18 meters; the Yellow Sea, which covers 380,000 square kms and has an average water depth of 44 meters; and the East China Sea, which covers 770,000 square kms and has an average water depth of 370 meters.

South of the mainland is the South China Sea, covering an area of 3.5 million square kms and having an average water depth of 1,212 meters. A total of more than 5,000 Islands are scattered like stars throughout our marine area. The mainland coastline starts in the north at the mouth of the Yalu Jiang and runs south to the mouth of the Beicang Jiang, covering a total distance of about 18,000 kms.

China is extremely rich in coastal and marine resources. Besides organic, hydraulic, tourism, and other resources, petroleum, natural gas, brine water, geothermal energy, and other underground resources occupy extremely important statuses. The coastal region has convenient communication and a dense population. Over 70 percent of China's large and medium-sized cities and 55 percent of our GNP [gross national product] is concentrated here, and it is the most developed region in social and economic terms. This is especially true since reform and opening up, when industrial and agricultural production and all other industries have undergone unprecedented development. Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Xiamen, Xiantou, Shenzhen, Zhuhai, Zhanjiang, Beihei, and other coastal cities have been made open cities or special zone cities. They have turned the coastal region into a base area which promotes development of China's entire national economy and into an important region for conducting international exchanges in all areas.

The geological environment of China's coast and marine areas is complex and varied. There has been increasingly severe destruction of the geological environment over the past several years following the rapid development of our economy along the coast and large-scale development of marine resources. The combined effect of natural conditions and human activity have create many geological natural disasters. For example, many coastal cities have experienced serious land subsidence and seawater intrusion due to intense exploitation of groundwater or oil and gas resources; global changes in sea levels and crust or ground subsidence in coastal regions have resulted in rather abrupt rises in sea levels in several regions which have exacerbated the threat from storm tides; intense beach erosion and deposition activities have directly endangered the safety of harbors, piers, and other coastal projects and seriously affected fishery, breeding, and so on; moreover, coastal volcanic eruptions, earthquakes, landslips, and so on have also occurred at times. All these things directly affect normal progress in coastal and marine resource development and project construction, and they have a major impact on evolution of the geological environment. As a result, it obviously is extremely important now that we protect the geological environment of China's coastal and marine regions and prevent geological disasters. This work is essential.

## II

The main geological disasters and geological environmental problems in China's coastal and marine regions are:

1. Earthquakes. Many of China's coastal cities including Dalian, Jingzhou, Haicheng, Tianjin, Shanghai, Fuzhou, Xiamen, Taibei, and so on along the eastern coast are located in the earthquake zone ringing the Pacific Ocean, a zone of powerful seismic activity. Frequent and powerful seismic activity has caused extremely severe losses of the people's lives and property. Examples include a magnitude 7.5 earthquake which occurred at Quanzhou on 29 Dec 1604, a magnitude 7.3 earthquake which occurred at Haicheng on 4 Feb 1975, and a magnitude 7.8 earthquake which occurred at Tangshan on 28 Jul 1976. Magnitude 6 and higher earthquakes have occurred frequently in the Bohai Sea, Yellow Sea, East China Sea, and marine areas of the Yellow Sea.

2. Storm tides. China's coast is one of the regions of the world with the most severe storm tides. According to statistics, over a period covering nearly 400 years from the late Ming Dynasty to 1964, a total of more than 50 storm tide disasters occurred, including 16 huge tide disasters and 5 destructive tide disasters. On the 1st day of the 6th month of the lunar calendar during the 35th year of the reign of Kangxi in the Qing Dynasty (1696), a storm tide killed over 100,000 people in Shanghai Municipality and the area near Baoshan, Chongming, and Wusong. A storm tide disaster during the 47th year of the reign of Qianlong during the Qing Dynasty (1782) inundated seven counties in the northeastern part of Shandong (in what is now the Shengli oil field region). A violent typhoon attacked the Xiantou region of Guangdong in 1922 and caused a huge storm tide disaster which flooded seven counties and killed over 70,000 people. A grade-12 typhoon hit land in Zhejiang in 1956 and caused a large tide along with a huge wave that destroyed the sea wall in Xiangshan County and flooded an area extending 20 li inland, inundating 410,000 mu of farmland, destroying over 70,000 houses, and killing several 1,000 people. A grade-23 typhoon also hit land in Zhejiang in 1989 and caused a disaster that affected 6.81 million people and led to direct economic losses of 1.36 billion yuan. Storm tides are becoming increasingly severe along China's coast and the losses they cause rise every year. The average yearly economic loss was about 100 million yuan during the 1950's and 1960's, 200 to 400 million yuan during the 1970's, and 300 to 500 million yuan during the 1980's. It reached 5 billion yuan in a single year during 1989.

3. Ground subsidence. Many of China's coastal cities have experienced ground subsidence to varying degrees due to intensive exploitation of groundwater and other activities. In Shanghai Municipality, the maximum subsidence in the subsidence center from 1921 to 1965 was 2.63 meters and it subsided a total of 36.7 mm from 1966 to 1986. In Tianjin Municipality, the area of the subsidence region from 1959 to 1979 covered 7,300

square kms and the maximum total subsidence was 1.73 meters. The maximum subsidence at Ningbo up through 1986 was 59.63 mm.

4. Rising sea levels. There has been a tendency toward relative rises in sea levels along most parts of China's coast over the past several decades. The average rate of sea level rising along the western shore of Bohai Bay, the Chang Jiang delta, and other regions has been 3 to 8 mm/year. Projections indicate that the sea level will rise another 20 to 50 cm in these regions over the next few decades. Rising sea levels greatly increase the threat of seawater intrusion and lead to the occurrence of seawater inversion, expansion of salinization, and other phenomena.

5. Intrusion of seawater into groundwater. Incidents of the intrusion of seawater into groundwater have continually occurred in coastal cities and mining regions over the past few years. In Dalian City, for example, seawater intrusion into groundwater resources has occurred at 11 locations since 1970 covering a total area of 250 square kms and the seawater has intruded underground inland for a distance of more than 10 kms and the chlorine ion content of the groundwater has reached 7,000 mg/l. Another example is Laizhou City in Shandong Province, where the chlorine ion content of groundwater in seawater intrusion areas has reached 9,500 mg/l and the salt content has risen abruptly from the original 1 g/l to 8 g/l and has attained a maximum of 18.98 g/l. The scope of seawater intrusion has continually expanded at an average of 3.47 square kms per year. Degradation of water quality has caused 12,280 water wells to be abandoned, 45,000 people have a shortage of drinking water resources, and there is no water to irrigate 53,000 mu of cultivated land.

6. High fluorine groundwater. The fluorine content of groundwater has risen every year in several coastal regions over the past several years and has attained a maximum content of more than 3.0 mg/l, far higher than the 1 mg/l standard for drinking water stipulated by the state. A fluorine toxicosis survey 113,397 people in the Huanghua region of Hebei Province in December 1983 found that 18,424 people, equal to 16.8 percent of the total number of people surveyed, suffered from fluorine toxicosis. Of those affected, 97.6 percent were young people and children less than 35 years of age. Mottling of the teeth was found on those suffering from fluorine toxicosis and they experienced skeletal and joint pain.

7. Shallow-formed gas on the sea bottom. "Shallow-formed gas phenomena" exist on the sea bottom in several regions. In the East China Sea region, for example, there are accumulations of methane gas at a depth of 24 meters which have erupted to a total height of 44 meters and erupted the seawater 14 meters, which can cause fires.

8. Beach erosion and deposition. China's coastal beaches are extremely unstable. Obvious erosion has occurred over the past several decades on parts of the shore of the

Bohai Sea from Qinhuangdao to Qililai, at the mouth of the Jian He, the mouth of Qikou-Dakou He, Luanjiakou, and so on, and on parts of the western shore of Haizhou Bay, the northern shore of Hangzhou Bay, and the coast of Meizhou Bay, the northern coast of Beibu Gulf, and parts of other regions and there has been destruction of coastal structures, land resources, tourism resources, and so on. Beaches have been continually aggraded at the mouths of major rivers like the Huang He, Chang Jiang, Luan He, Zhu Jiang, and so on and in adjacent areas and there has been serious silting in several harbors.

Moreover, there is extremely serious offshore pollution, seabottom landslips, and so on.

In summary, China's coastal and marine regions have complex geological environments and relatively serious geological disasters. Many geological environment problems and geological disasters are interrelated with and have mutual effects on the occurrence of other natural disasters, which in turn exacerbates the extent of coastal and marine calamities. Thus, protection of the coastal and marine geological environment and prevention of geological disasters are important aspects of protecting the coastal and marine environment and promoting development of the coastal economy and maritime industry.

### III

The most important aspect of protecting China's coastal and marine geological environment and preventing geological disasters is good forecasting, supervision, and management work. The basic goal of this work is the forecast the time, location, intensity, and losses created by geological disasters that might occur to enable active prevention and limit or prevent disasters and reduce the losses from disasters to the maximum possible degree.

The relevant countermeasures and proposals are:

1. Fully acknowledge the continual degradation of the geological environment of China's coastal and marine regions and do good propaganda work to make all our people understand that protecting the coastal and marine geological environment is a major part of protecting the natural environment and that development of the coastal economy and maritime industry is extremely important.

2. Strengthen survey and research work on current geological environment conditions in coastal and marine regions, use beach surveys, regional geological surveys, and marine petroleum geology surveys as a foundation for undertaking a variety of geological environment surveys and assessments of intertidal zones, beaches, bays, harbors, islands, the seabottom, and so on, clarify the natural conditions and man-made factors which cause degradation of the geological environment, and suggest countermeasures and ways to protect them.

3. Establish coastal and marine region geological environment monitoring station networks, obtain first-hand



data, analyze and study evolutionary laws of the geological environment and the formational conditions of geological disasters.

4. Formulate laws and regulations for geological environment management and supervision for China's coastal and marine areas.

5. Undertake comprehensive survey research work in hydrogeology, engineering geology, environmental geology, and other areas to provide a reliable geological foundation for protecting island water supplies, exploiting oil and gas resources, and so on.

6. Use rates of ground subsidence and sea level rising, historical tide levels, storm tides, and other information to consolidate and raise seawalls in major coastal cities and industrial and mining enterprise locations, prevent storm tides and other types of tidewater intrusion, and prevent or reduce personnel casualties and property losses.

7. Control the rate of groundwater extraction in coastal cities and industrial and mining enterprises, readjust the water-use structure, rationally develop and utilize groundwater resources, and prevent or control ground subsidence, seawater intrusion, and other phenomena.

8. When formulating coastal and marine region resource development and economic development programs, propose plans for protecting the geological environment and preventing geological disasters, achieve coordinated development of society, the economy, and the geological environment.

9. During the Eighth 5-Year Plan, select typical cities or regions to undertake coastal and marine geological environment protection trial work to obtain experience that can be extended broadly.

#### **Development of Freon Substitute Announced**

91WN0521C Beijing ZHONGGUO HUANJING BAO [CHINA ENVIRONMENTAL NEWS] in Chinese 23 Apr 91 p 1

[Article by Hu Kefan [5170 0344 0416]: "Changling Machinery Plant Promotes Freon Substitute That Can Be Used Directly in Production Without Equipment Retooling"]

[Text] The state-run Changling Machinery Plant in Shaanxi recently announced to the media that the plant had cooperated with Xi'an Jiaotong University in successfully developing a replacement for the coolant Freon R12 and that they are cooperating with the Bayer Corporation in Germany to reduce the amount of Freon R11 used in electric refrigerator foam material production by 50 percent.

The relevant international treaties stipulate that all freon use will cease in the developed nations by the year 2000 and in the developing nations by 2010. All nations of the

world are now feverishly doing research on reducing or eliminating the use of freon.

The state-run Changling Machinery Plant, which produces Changling—(Alisidun) electric refrigerators, is a state first-level enterprise. This plant took just a little more than 1 year to develop the new material R152a/R22 and successfully used it as a substitute for freon coolant, and it passed province-level examination and approval at the end of 1990. The plant is also cooperating with the Bayer Corporation in Germany to use a new type of imported polyamine resin foam material to produce a refrigerator foaming agent to reduce the amount of Freon R11 utilized by 50 percent. Tests by the Shaanxi Electric Refrigerator Inspection and Testing Center show that all technical indices of this plant's products attained state grade-A standards. The refrigerator cooling speed and safety indices are equivalent or slightly superior to the original devices which used Freon R12. The new technology can be used in production without retooling of the original equipment and has a rather high application and extension value.

#### **New Regulations Increase Fines for Industrial Pollution**

HK2806053091 Beijing CHINA DAILY in English 28 Jun 91 p 3

[By staff reporter Zhu Baoxia]

[Text] Factories will soon be charged 40 percent more if they discharge waste water into the environment without full treatment.

Units which make too much noise will be fined between 200 and 3,200 yuan every month, too.

The State Council has recently approved two new national standards governing the collection of fees for discharging waste water, and for making a noise, to the detriment of the environment, that are expected to be put into effect next month.

Drafted jointly by three State departments, including the National Agency for the Environmental Protection, the State Administration of Commodity Prices and the Ministry of Finance, the standards are designed to help increase consciousness of and enthusiasm for the environment. Wang Yangzu, deputy director of the agency, said in Beijing yesterday that, in line with the new regulations, about two billion yuan would be collected from the new imposts, an increase of 300 to 400 million yuan compared with previous years.

A survey conducted by the State Administration of Commodity Prices showed that the increase would not seriously hurt companies which had to pay the extra, which represented a small proportion of their profits.

The country introduced the fee collection system into environmental protection work in the late 1970s, and it was worked out on the principle that the polluter pays.

The programme has been applied in some 90 percent of the cities and counties in the 30 municipalities, autonomous regions and provinces, except for Taiwan.

Over 11 billion yuan has been collected over the past 12 years, most of it being spent on projects to treat environmental pollution and to import new technology.

Yet, according to Wang, quite a number of enterprises were reluctant to invest labour and money in environmental protection and treatment, because the cost was much more expensive than paying compensation to the State for causing contamination.

Some units, even though they have built pollution treatment plants, would rather be fined, with an eye to make a profit.

Investigations revealed that the cost of constructing waste water treatment facilities had risen from around 100 yuan per ton to more than 500 yuan.

Meanwhile sources from the agency also showed that water pollution remained one of the greatest challenges facing China today.

#### **Waste-Recycling Progress Noted; Further Measures Urged**

*HK0307032791 Beijing CHINA DAILY in English  
3 Jul 91 p 3*

[By staff reporter Li Hong]

[Text] The country's waste-recycling industry has made great progress in the past years, but officials have urged more people to join the collecting teams to salvage resources.

Income from waste collecting and processing reached 5 billion yuan (about \$1 billion) last year, an increase of 2 billion yuan compared with three years ago, according to the Resources Conservation and Utilization Bureau of the State Planning Commission.

But there are still 25 billion yuan (\$4.7 billion) worth of discarded materials and products not being collected and recycled. This is not only a sheer waste of the country's limited resources but it also contaminates the living environment.

Garbage piled up in city suburbs amounts to at least 70 billion tons on a total area of 600,000 mu (40,000

hectares) across the country, and it is still stacking up at a rate of some 10 percent each year, according to an official source.

In Beijing alone, nearly 7,000 tons of garbage accumulate daily—a staggering 2.5 million tons a year, which can form a hill as large as Jingshan, which overlooks the Forbidden City.

Experts said that the discarded worn-out and redundant materials which could be collected and melted down, include scrap steel and iron, metals, glass, plastics, chemical fibres and electrical items.

China's recycling industry is lagging far behind the Western countries when the number of people engaged in recovering refuse, the technology and the volume dealt with are taken into consideration.

Every year Britain processes 100 million tons of industrial refuse and produces an output value of 4 billion pounds (\$6.4 billion), and the United States' recycling trade harvested more than \$6 billion last year.

But in China, according to statistics from the Ministry of Materials and Equipment, every year about 4.5 million tons of scrap steel and iron, 200,000 tons of non-ferrous metals, 6 million tons of paper and printed materials and up to a million tons of plastics and rubber are wasted.

Waste buying and selling in China is regarded as belonging to a lower section of society in which few people are interested.

Only 150,000 people are engaged in the humble business, and 90 percent of them come from rural areas. In Beijing, about 20,000 farmers walk through refuse tips and buy waste in the lanes and streets.

Most of the urban people frown at the job because of its dirtiness and the loss of face.

Nominal investment and backward technology have hindered the growth of the industry, officials said.

The Ministry of Materials and Equipment, the country's main processor of refuse, has only one research centre on waste recovery.

Processing technology is simple, centering on physical methods such as cutting and squeezing, which is said to result in a low utilization rate of discarded materials.

The United States is said to be capable of recouping 80 percent of the useful ingredients from waste, but China can recover only 25 percent.



## REGIONAL AFFAIRS

### Northeast Asia Environmental Organization To Be Established

SK1507060191 Seoul YONHAP in English 0516 GMT 15 Jul 91

[Text] Seoul, July 15 (YONHAP)—South Korea and the Soviet Union have agreed in principle to establish an international environmental organization to tackle worsening pollution in Northeast Asia, with North Korea, Japan and China participating, Environment Minister Kwon I-hyok said Monday.

On arriving at the Kimpo International Airport, Kim [as received] said he had discussed matters of mutual concern pertaining to general environmental problems with his Soviet counterpart Nikolay Vorontsov in Moscow and they had agreed to push for a Northeast Asian environmental organization as a part of global efforts to protect nature.

They also decided to build a close cooperative relationship in fields such as preservation of living resources, protection of the ocean environment, suburban improvement and pollution measurement, Kwon said.

The two ministers exchanged minutes on joint efforts, including their plan to found an international organization in Northeast Asia.

### Asia-Pacific Environment Congress Issues Declaration

OW0507131791 Tokyo KYODO in English 1154 GMT 5 Jul 91

[Text] Tokyo, June 5 KYODO—Representatives of 22 countries and nongovernmental organizations from the Asia-Pacific region meeting in Tokyo called Friday for a reexamination of consumption-oriented economic models which destroy the environment.

A total of 70 delegates, including 11 government ministers, attending the Environment Congress for Asia and the Pacific (Eco Asia '91), agreed to the declaration which calls on nations in the region to work toward the development of new economic models based on the concept of sustainable development.

The declaration stated that "mass production, mass consumption and mass disposal based on the behavioral principle of profit maximization" encouraged by the industrial revolution now threatens to cause "environmental destruction on a global scale."

The declaration calls, instead, for an "eco-industrial revolution," defined as a move away from a reliance on fossil fuels, the provision by developed countries of low-cost, environmentally sound technologies and a reflection in market prices of the environmental cost of development.

The declaration stated its aim to serve as a contribution from the Asia-Pacific region to the global debate over environmental problems leading up to the June 1992 earth summit, sponsored by the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil.

UNCED Secretary General Maurice Strong told a press conference after the congress that "a high level of generality" in some sections of the declaration reflected disagreement among participating countries.

"It would be unrealistic to give the impression that everything is harmonious," Strong said. "We have a long way to go yet before we get agreement on specifics between the developing world and the industrialized countries."

During debate on the framing of the declaration, delegates from Fiji, Australia, and Papua New Guinea insisted on the inclusion of references to the threat that greenhouse gases from developed countries and a possible rise in sea levels caused by global warming pose to small island nations in the south Pacific.

Australian Environment Minister Ros Kelly told the conference it is essential that nations in the Asia-Pacific region "demand that developed nations do something about greenhouse gases."

"Since I have been environment minister, I have been to many conferences in the northern hemisphere where they hardly acknowledge that the southern hemisphere exists," Kelly said.

"How can we have development in the developing world unless the developed world wakes up to its responsibilities in regard to greenhouse gases in particular?"

Representatives of some developing countries, including Indonesia Democratic Party member Markus Wauran, China's National Environmental Protection Agency Administrator Qu Geping, and Sri Lankan Minister of Environment Wimal Wickramasinghe, stressed the need to lower the cost to their countries of pollution-eliminating technology.

"The current international order and economic system does not facilitate the cleaning up of the environment," Qu said. "Many developed countries talk but do not show a desire to give technology on favorable terms."

### Indonesian Minister Addresses Asia-Pacific Environment Congress

OW0407113391 Tokyo KYODO in English 0944 GMT 4 Jul 91

[Text] Tokyo, June 4 KYODO—Discrepancies between rich and poor nations must be eliminated if the depletion of the world's natural resources is to be prevented, Indonesian Minister for Population and Environment Emil Salim said in Tokyo on Thursday.

Salim told the Environment Congress for Asia and the Pacific (ECO Asia '91) that the world's richer nations may have to strike an economic bargain with the poorer nations to halt the destruction and sale of finite natural resources held by poorer nations attempting to raise their standards of living.

Salim, in a keynote address to about 70 environment ministers, legislators, representatives of international organizations and academics from countries in the Asia-Pacific region, said there is a close correlation between poverty and environmental destruction and between levels of wealth and the ability to safeguard the environment.

"The prevailing global economic conditions are not particularly profitable to the developing countries and their plight might even have been worsened by the processes of globalization and of international economic interdependence," Salim said.

"The term 'interdependence' evokes a sense of balance and of symmetry in the economic relations between nations, but this is certainly not the case today.

"The balance is still very much in favor of the advanced countries in terms of markets, production, monetary controls, possession of technology and general resource flows," he said.

Salim said that to redress the balance, developed nations may have to consider paying less developed nations to retain resources such as forest timber as "carbon sinks, climate regulators and repositories of diversity" for the entire world.

"Countries that set aside tracts of forests for such functions are in effect performing services which should be remunerated," Salim said.

"Moreover, in reserving such tracts, countries have to forego incomes and development options which ought to be replaced or otherwise compensated," he said.

Japanese Minister of State and Director General of the Environment Agency Kazuo Aichi told the delegates their goal during the two-day conference should be the formulation of an Asia-Pacific regional statement of environmental goals to be submitted to the earth summit, sponsored by the United Nations Conference on Environment and Development in Rio de Janeiro, Brazil, in June 1992.

#### **South Pacific Regional Environment Group HQ To Move to Western Samoa**

BK0407094091 Hong Kong AFP in English 0843 GMT  
4 Jul 91

[Text] Noumea, July 4 (AFP)—The headquarters of the South Pacific Regional Environment Programme will move to Western Samoa, delegates to its fourth intergovernmental conference decided Thursday.

It currently sits in this city, the capital of New Caledonia, (words indistinct) a body subordinate to the South Pacific Conference, but it is expected to be made an independent organisation and put in charge of overseeing a five-year plan for protecting the South Pacific environment.

All three decisions are expected to be adopted by consensus during the ministerial session of the conference, which begins Friday, after top bureaucratic officials currently meeting finish these sessions.

### **BURMA**

#### **Government Signs Documents on UN Aid, Environment**

BK1207111991 Rangoon Radio Burma in Burmese  
1330 GMT 11 Jul 91

[Excerpts] A ceremony was held today at the Foreign Ministry Annex for the signing of two project documents providing UNDP [United Nations Development Program] assistance for agricultural development and development of the border areas and national races. The ceremony also marked the signing of a project document on the environment.

At the ceremony, U Ohn Gyaw, chairman of the Coordinating Body for Cooperation With International and Other Organizations for the Development of Border Areas and deputy foreign minister, and resident coordinators of the UN agencies and Mr. Gerd Merrem, UNDP resident representative, delivered an address and signed the project documents. [passage omitted]

The projects are the first of the UN interagency-assisted project for border area development, and the UNDP's input amounted to US\$1.3 million. The Border Areas Community Development Project is designed to assist people in the border to select, design, and implement community development projects, particularly those for income generation and social infrastructure at the village level.

Under the integrated agricultural development project, the UNDP will extend assistance in introducing on a pilot basis techniques of agro-forestry, such as conservation farming in the border areas. These projects are to be carried out in the East Keng Tung, Kokang, and Wa areas.

The Government of the Union of Myanmar [Burma] had launched a program for development of border areas and national races since 1989 and had already incurred development expenditures amounting to more than 223.96 million kyats for this purpose. The UNDP-assisted project would complement the concerted efforts of the Government of the Union of Myanmar toward development of the border areas and national races.

The project on the environment was signed between U Ohn Gyaw, deputy foreign minister in his capacity as

chairman of the National Commission for Environmental Affairs, and Mr. Gerd Merrem, UNDP representative in Burma.

The Government of the Union of Myanmar has always placed special emphasis on environmental protection and formed the National Commission for Environmental Affairs in February 1990 in order to help coordinate environmental policies.

This project, for which UNDP would provide US\$680 thousand, is designed to help strengthen the national commission in its efforts to promote environmentally sound and sustainable development in the Union of Myanmar.

## JAPAN

### MITI Minister Renews Call for Early Cut in CFC Use

OW0107154891 Tokyo KYODO in English 1140 GMT 1 Jul 91

[Text] Tokyo, July 1 KYODO—Minister of International Trade and Industry Eiichi Nakao on Monday renewed his call for Japanese industries to stop using ozone-depleting chlorofluorocarbons (CFCs) as soon as possible.

Nakao was speaking at a meeting on protection of the ozone layer which was supported by the Ministry of International Trade and Industry (MITI) and the Japan Industrial Conference for the Protection of the Ozone Layer.

Some 55 participants, including representatives of makers and user companies of CFCs, attended the meeting, held to kick off the ministry's "Ozone Layer Protection Promotion Month," which started the same day.

Nakao referred to the year 2000 as the international goal agreed last year in the so-called Montreal protocol for elimination of CFCs, and urged Japanese industries not to wait until then.

Rather, they should intensify their efforts to stop using those chemicals and accelerate development of substitutes for CFCs and other ozone-damaging chemicals cited in the protocol, like halons and carbon tetrachloride as soon as possible, he said.

Technologies developed to reduce CFC use are also expected to be transferred to developing nations, Nakao pointed out, but added that they should not be given to nations which have not signed the Montreal protocol.

In reply, Yasunobu Kishimoto, chairman of the industrial conference who is also a chairman of Showa Denko K.K., said the organization is planning to seek stronger controls on the use of CFCs and other chemicals.

Moriya Shiki, president of Mitsubishi Electric Corp., also reported his company is trying to stop CFC usage by 1995.

According to MITI officials, Japan's annual CFC consumption was reduced by 25 percent to about 110,000 tons between July 1989 and June 1990 from 147,000 tons used over the previous 12 months, as a result of efforts by industries and the government.

### Environment Agency To Rent Out Electric Cars in Polluted Areas

OW1507074791 Tokyo KYODO in English 0715 GMT 15 Jul 91

[Text] Tokyo, July 15 KYODO—The Environment Agency will rent out electric vans to selected local government bodies in areas polluted by auto exhausts, agency officials said Monday.

The agency expects to study the effectiveness of the electric cars through daily usage, in cooperation with manufacturers, the officials said.

The 14 Toyota-made vans are first to be made domestically, and carry two passengers with a load capacity of 2.5 tons.

The van runs about 160 kilometers after 10 hours of power charge. Maximum speed is 85 kilometers per hour and the vehicle costs 20 million yen.

They will be leased to the agency by Toyota Motor Corp. at 20 million yen per year.

Yokohama and Kawasaki Cities in Kanagawa Prefecture will receive two vehicles each. Aichi Prefecture will get four, including two vehicles exclusively for Nagoya City.

Setagaya ward in Metropolitan Tokyo, Osaka Prefecture, Osaka City, Kobe City, and Hyogo Prefecture will be given one vehicle each.

Meanwhile, Osaka City plans to buy 60 electric minicars within the next three years mainly from Daihatsu Motor Co.

## SOUTH KOREA

### 15 Breakdowns Reported at Nation's Nuclear Power Plants

SK1607022391 Seoul THE KOREA TIMES in English 16 Jul 91 p 8

[Text] A total of 15 breakdowns occurred in the nation's nuclear power plants from January-July 15 this year, according to a report submitted to the National Assembly by the Energy-Resources Ministry yesterday.

The report said this year's troubles in atomic power plants were almost similar to last year's set at 14.



There were eight cases of breakdown in Kori, Kyongsangnamto, where four nuclear units are in operation, followed by Ulchin (four), Yonggwang (two) and Wolsung (one), it said.

All of the troubles, however, occurred in the secondary island involving turbines and generators, posing no threat of radioactive leakage, the report said.

The largest portion of troubles has been caused by defective mechanical components and human errors.

## THAILAND

### Government Will Not Oppose U.S. Ban on Thai Wildlife Imports

BK0507013391 Bangkok THE NATION in English  
5 Jul 91 p A4

[Excerpts] Thailand is in the process of strengthening its wildlife protection laws and will not protest the United States move to restrict imports of Thai wildlife, the Foreign Ministry spokesman said yesterday.

"We won't do anything" to persuade the United States not to impose the import restrictions, said Sakthip Krairoek.

He said the Foreign Ministry had known of the U.S. move for some time but there was nothing more the country could do.

Tougher penalties against wildlife traders, bans on wildlife possession, import and export, and extended protection to cover foreign wildlife smuggled through the country are being considered by Thai authorities and will become law soon, Sakthip said.

The planned U.S. import restrictions are part of an international effort to curb what has been described as an "embarrassing" trade boom in endangered wildlife in Thailand.

U.S. officials in Washington said on Tuesday the restrictions could disrupt \$50 million in Thai exports and could cover everything from the rare Malayan Pangolin, a scaly anteater, to tropical fish and crocodile skin bags. [passage omitted]

Sakthip confirmed reports that plant exports will not be affected by the planned restrictions.

Reports about the U.S. move coincided with major raids in Thailand on a syndicate offering foreign tourists exclusive meals made of rare wild animals.

News reports said many Asians, believing that eating such wild animals as bears would help increase their sexual capabilities, were regular customers of the syndicate's restaurant.

Sakthip said the Foreign Ministry would launch an international public relations campaign to inform potential tourists that such meals are illegal in Thailand.

### Environmental Cleanup Budget To Come From Oil Fund

91WN0433A Bangkok THE NATION in English  
11 Apr 91 p A4

[Article by Sorrayuth Suthassanachinda]

[Text] The government yesterday unveiled a crucial three-point proposal which includes the drawing of about Bt2 billion from the Oil Fund to set up an Environment Fund as part of its attempt to clean up Thailand's overburdened environment.

Based on the "polluter-pay" principle, PM's Office Minister Phaichitr Uthavikul, who oversees energy affairs, said the transport sector which is the major air polluter will have to pay the most for the clean-up.

At this initial stage, he expected the Oil Fund, to which every user of petroleum products contributes, to set aside about Bt2 billion for this purpose. When the government budget, foreign aid, soft loans as well as treatment charges are included, the fund will be worth up to Bt4 billion, Phaichitr said.

Although the budget might be insufficient to undertake environmental cleanup nationwide, Phaichitr said it would provide a good start for the long-term action programme, which is the primary task of this caretaker government.

The screening committee on economic affairs, chaired by Deputy Prime Minister Snoh Unakul, has placed environmental protection at the top of its agenda.

"I prefer that we grow a bit slower in a healthy environment than to grow fast and damage our own land," Snoh said.

Industrial waste discharges as well as the toxicity of raw materials will have to be accounted for thoroughly to ensure that the "hidden" ecological costs are fully taken into consideration, Phaichitr said.

The government, on the other hand, has to take full responsibility by allocating a sufficient budget to help the industries offset heavy initial investment, he added. Phaichitr said he would urge the Budget Bureau to accelerate the consideration of the policy and set aside a budget for this purpose in the coming fiscal year starting 1 October.

The minister said the government should be responsible for setting up treatment plants—may they be for waste water, solid or toxic wastes. The private sector lacks incentives to invest and operate such facilities which are unlikely to yield high profits.

At the same time, three task forces have been appointed to lay down the framework for the coverage of the fund, its operation and administration as well as the legal basis for its creation.



The three working groups will have to present their recommendations to the screening committee on economic affairs within two weeks.

The fund, which is part of the government's effort to rehabilitate Thailand's deteriorating environment, will lead to other actions, including environmental auditing and proper law enforcement.

When asked whether the environmental costs would be added on top of the overall production expenses, eventually eroding Thailand's competitiveness in the world market, Phaichaitr said the country should no longer sacrifice its environment for cheap exports.

It has to be accepted as a matter of fact that Thailand's environment is in a deep crisis, he added. "Now everybody has to pay."

### VIETNAM

#### World Food Program Sponsors Afforestation Project

BK1007070791 Hanoi VNA in English 0600 GMT  
10 Jul 91

[Text] Hanoi VNA July 10—During the recent spring arbour season more than 18,000 ha were added to the

forest cover in the northern provinces of Bac Thai, Ha Son Binh and Vinh Phu and around Hanoi. This represented 90 percent of this year's programme under a project funded by the World Food Programme.

Survival rate of the trees, mostly eucalyptus and acacia, is 90 percent.

The rest of the plan, 2000 ha, will be completed in autumn.

A total of 3,650 ha of pulpwood were planted in the first half of this year in the provinces of Vinh Phu, Hoang Lien Son and Ha Tuyen north of Hanoi. The area accounts for 60 percent of the plan for the whole year.

Hoang Lien Son minority nationals used to practise the ruinous slash-and-burn method of farming, the administration has provided them not only with land for tree planting, but also with material means to help to put an end to shifting cultivation.

Meanwhile in Vinh Phu, pulpwoods were planted alongside food crops, which ensures a good income for planters.

## REGIONAL AFFAIRS

### Czech, Hungarian Delegations Meet on Danube Gabčíkovo Dam Project

AU1607133591 Prague CTK in English 1546 GMT  
14 Jul 91

[Text] Bratislava July 14 (CTK) - Delegations from the Czechoslovak and Hungarian governments are meeting here today and tomorrow to negotiate the fate of the controversial Gabčíkovo-Nagymaros hydroelectric plant on the Danube River.

The current round of negotiations was called by Czechoslovakia after the two sides failed to reach agreement on the issue during talks April 21-22 in Budapest.

Slovak Forest and Water Management Minister Viliam Oberhauser told CTK the Czechoslovak position is clear and firm: finish construction of the dam according to its 1977 agreement with Hungary, and put into operation.

If the two sides cannot reach agreement, he said, then Czechoslovakia is prepared to go ahead without the Hungarians, finishing the dam on the Slovak side in Gabčíkovo.

Slovak Premier Jan Carnogursky said after visiting the construction site recently that it is 80 percent completed, and that what is already built cannot be destroyed. Preventing environmental damage at this point requires that the project be completed, he stated.

Eurochain, a Czechoslovak-based group of environmental activists from Czechoslovakia, Hungary and Austria, has occupied the construction site since July 4, blocking the feeds to the canal and the Hrusov reservoir.

The Gabčíkovo-Nagymaros twin dam project was signed into being by the governments of Czechoslovakia and Hungary in September 1977. Building began on both sides in May 1978, but in February 1989 the Hungarians called for negotiations on the project. The outcome was a protocol for construction to be speeded up so the dams could start power production 15 months ahead of the originally agreed-on schedule.

Three months later the Hungarian Government told the Czechoslovak ambassador in Hungary it was stopping work at Nagymaros for two months. Under pressure from domestic environmental groups, Hungary announced in August 1989 that it was pulling out of the project on the Slovak side as well.

Czechoslovak officials say to accept Hungary's unilateral breach of the agreement and demolish what has already been built would mean writing off all expenses incurred so far, plus the electricity which would otherwise be produced, amounting to a total loss of over 20,000 million korunas (666.7 million dollars).

### Slovak Officials Discuss Completion of Gabčíkovo Dam Project

LD1007143491 Bratislava Ceskoslovensky Rozhlas  
Radio Network in Slovak 1000 GMT 10 Jul 91

[Interview with Slovak Prime Minister Jan Carnogursky, Viliam Oberhauser, Slovak minister of forestry and water economy, and Julius Binder, director of the Vodohospodarska Vystavba state enterprise, by correspondent Jan Janosi; date and place not given—recorded]

[Excerpts] When journalists asked [Slovak] Prime Minister Jan Carnogursky yesterday why he is to visit the Gabčíkovo water project, he told them that he, as a good lawyer, is going to visit the subject he will be holding talks on in a few days time. The talks will take place next Monday with representatives of the Hungarian Government. The prime minister was accompanied in Gabčíkovo today by Viliam Oberhauser, [Slovak] minister of forestry and water economy, and Julius Binder, director of the Vodohospodarska Vystavba [water project construction] state enterprise.

Jan Janosi has invited all three of them to his microphone. Jan Carnogursky was first to express his impressions:

[Carnogursky] We could all see that the Gabčíkovo project is 85 or more percent complete and that the Gabčíkovo dam, which has been constructed, cannot be removed. This means that in order to prevent ecological damage we must complete the Gabčíkovo project rather than not complete it. There is no final position of the Slovak Government on this to date—we should have it in about two weeks time. We are going to the talks with the Hungarian side with a directive which has been approved by both the Slovak and Federal Governments. This directive envisages the option of being able to complete the Gabčíkovo project on the basis of a decision which the government will adopt after the talks.

[Janosi] Mr. Minister, the project is nearly completed. When do you envisage—if everything goes well—it generating the first electricity?

[Oberhauser] We have a draft concept for the completion of the water project which also takes into account the possibility that agreement will not be reached with the Hungarian side. In the case of a speedy solution of the construction of the whole project, which would be based on the assumption that we return with the Hungarian side to the implementation of the original agreement, then we reckon that the Danube should be dammed in the spring of next year, and turbines could start working sometime in May or June next year. Naturally, the entire completion of the water project will continue, but from 1993 sources obtained from the project's operation, that is, electricity and also shipping, could finance the completion of the projects from 1993. You can see from all this that it is very important for us to continue the work for the project to bring us economic profit—simply for it

to become self-financing—and for us to be able to complete it. Connected with this is the completion of all those ecological parts of the project—if there is no money then you know that it is difficult to solve ecological conditions which exist around the Gabčíkovo and around the Danube. There we envisage such solutions which would turn the area into an oasis of good natural environment, and where people would go for recreation. [passage omitted: Janosi asks water project director about some technical points of filling the water channel and about protest demonstration]

### 'Eurochain' Environmental Group Wants Gabčíkovo Project Halted

LD1607034591 Prague CTK in English 1908 GMT  
15 Jul 91

[Text] Bratislava July 15 (CTK)—Eurochain, an environmentalist group protesting at the site of the Gabčíkovo Dam on the Danube River, provided CTK with a statement today demanding an immediate stop to construction.

The statement says the project's future should be decided by the local population, and what has been completed so far—about 80 percent—should be inspected by a special parliamentary commission yet to be set up.

About 30 members of Eurochain, a Czechoslovak-based group with support in Hungary and Austria, have been blocking the feeds to the dam's canal and Hrusov reservoir since July 3. They say the dam could strongly affect the region's environment.

The Eurochain statement demands the renegotiation of the contract which Czechoslovakia signed with Hungary in 1977 on the Gabčíkovo-Nagymaros twin dam project. In August 1989 the Hungarians ceased work on their side of the project under pressure from domestic environmental groups.

The Democratic Party (DS), a member of the Slovak Government coalition, at a news conference today blamed the problems surrounding the Gabčíkovo-Nagymaros twin dam project on "irresponsible speculation by some political forces in Hungary".

The DS called for the rapid completion of the hydroelectric project at least in the proposed "c" version, i.e. The part on Czechoslovak territory. The project is crucial for the future of the Slovak economy in terms of energy production and completion of a Danube-Rhine link, which will be an important route for Slovak trade, DS officials said.

The Hungarian side must compensate Czechoslovakia for the consequences of its breach of the 1977 agreement, DS officials said.

### Local Communities Fear Effects of Gabčíkovo Dam Project

91WN05424 Vienna DIE PRESSE in German  
10 Jun 91 p 18

[Article by Charlotte Grabner: "Will Schuett Island Become a Desert?—Concerns About Gabčíkovo"]

[Text] Bratislava—Margita Vrabelova is angry: Her young fruit trees have withered. The old trees survived and she was able to plant vegetables only thanks to the rains in May. For months Vrabelova, who is retired, was without water in her house and garden. The well had gone dry.

Vrabelova is convinced that "Gabčíkovo is to blame for this." She points to the dusty village street where the walnut trees were recently cut down. "Those were tall trees; they all died," she says.

More than one-third of the population of Schuett Island in the immediate vicinity of the Gabčíkovo dam get their water from their own wells. The one billion cubic meter ground water lake used to take good care of their needs. The water supply is not only getting shorter; water quality is also falling off due to pollution. Over the past two or three years the ground water level has been going down continuously. The inhabitants of Dunajská Lužná have already had to dig their wells four to six meters deeper. If the water level should continue to drop at the present rate, the region will soon become a disaster area.

The geologists of the Slovak environmental association predicted two years ago that at least 36,000 hectares would dry out. The dam strangles the rivulets; it keeps the inland delta from overflowing periodically; the marshland soil is devastated as a result.

At Hrusov, where the huge reservoir bulges out, only a few large tree stumps are left to remind one of the wetlands. Thousands of tall wetland trees were cut down; they can no longer draw and store the Danube's waters and regulate the climate. Now, in early June, the sun beats down mercilessly on the farmlands. Due to the lack of water harvests are getting smaller every passing year. But it is not only the flora which is suffering; many buildings in the vicinity of the dam have cracks or have become lopsided.

In February, the mayors and community leaders on Schuett Island addressed a petition to the Slovak government, asking that the Gabčíkovo project be dropped and that they be compensated for the losses already incurred. When construction began during the Husak era, no one cared about the views of the communities concerned. Now the mayors are manning the barricades and asking for money. Particularly clever ones among them are trying to use the despised power plant as a source of cash to be used to fill their town coffers.

The "velvet revolution" has not upset the Hydroconsult and Hydrostav power plant builders in the least. The mayors who are vociferously calling for a cancellation of

the Czechoslovak-Hungarian agreement are merely doing so "at the instigation of Hungarian parliamentarians," it is said. In any event, Hungary has decided to tear down Nagymaros, the half-finished "twin" of Gabčíkovo.

The town elder of Dunajská Lužná scratches his head. Yes, he says, the soil has gone dry. Does Gabčíkovo have something to do with it? He tells us to speak to "village ecologist" Maria Kozova who knows what those living next to the power plant are thinking. The commuters who take the bus to Bratislava to get to work are grumbling. "Intuitively, everyone is against it." But the media only talk about the advantages such as protection against flooding and about the money that would be lost if construction were halted. "The people are completely confused," Kozova says.

Our Skoda is bumping along the dirt road that leads to the dam. Total chaos reigns in the area to be inundated by the waters of the dam: there are puddles, craters, huge tree stumps, rock piles and mountains of sand. There is no sign of the Danube. Far off somewhere, in the west, it is said to be flowing—still.

The experts on both sides of the Danube are arguing about the best possible solution to the dilemma. The construction costs already amount to almost 20 billion crowns; 4,600 hectares of wetlands and meadows have already been sacrificed. The choice is between seven different plans.

The Slovak government is in favor of "variation C." Gabčíkovo must make do without Nagymaros; the Danube which forms the border at this point is rerouted onto Slovak territory. Prime Minister Ján Čarnogurský is confronted with a dilemma for family reasons as well. His brother Ivan, the chairman of the Christian Democratic Party (KDH), also happens to be the director of Hydrostav. And according to Maria Kozova, Ivan "laughs" about the efforts of the environmentalists to save the last remaining biotope of the inland delta.

Kozova and her colleagues at the academy of sciences are not taken with "variation C" at all. They are in favor of "variation D," i.e., complete Gabčíkovo without Nagymaros; reduce the size of the Hrusov reservoir and reactivate the wetlands. "That would restore prior conditions in 20 or 30 years—if we manage to find enough money." The primary goal is to prevent the destruction of the wetland biotope along the feeder canal which has been classified as "valuable" and "unique." Only a limited amount of water would be rerouted to the feeder canal so that the Danube would still be able to nourish the vegetation.

Kozova calls the environmentalists' demand to blow up the 17-km canal "unrealistic." What would one do with the thousands of tons of dirt and where would one get the compost to recultivate the area?

Peter Tatar, a representative of the Greens in parliament, says the Soviet Union has started to blow up

similar reservoirs which were 80 percent filled with mud and thus unusable. Years ago, Soviet experts came to Slovakia to see how the Slovaks proposed to solve this problem.

We are standing atop the wall of the reservoir near Samorin. Anton Uhnak remembers the old people crying when the bulldozers mowed down the wetland forest.

## BULGARIA

### Minister Outlines Government's Options on Kozloduy Nuclear Plant

AU0507071991 Sofia BTA in English 2240 GMT  
4 Jul 91

[Text] Sofia, July 4 (Tanya Tsekova, BTA)—Bulgaria can neither afford to close down the Kozloduy Nuclear Power Plant, nor can it replace it by her own power generation facilities, Mr. Aleksandur Tomov, deputy prime minister, told a press conference today. The plant meets about 40 percent of Bulgaria's electricity needs. If all these power generating facilities are stopped at once, the whole power generating system would get disrupted. The government does not underestimate the problem of nuclear safety, but in the country's present economic situation it can hardly allocate funds for it. The conclusions of the IAEA [International Atomic Energy Authority] mission are not final, Mr. Tomov said. They will be discussed by the government. The Council of Ministers accepts the observations and the list of irregularities presented by the international mission, but the latter consists of technical defects, mechanical omissions and employees' regrettable small errors, Mr. Tomov said. The first four VVR reactors were built in 1970 in accordance with the then valid safety standards. There are several variants of solving the problem, but the government will not be in a hurry to make its decision. On July 9 a Bulgarian delegation will meet foreign experts in Vienna to discuss the technical conditions at the Kozloduy Nuclear Power Plant, its future and the possibility of receiving international aid. Most probably the reactors will be stopped and repaired one by one.

Ecoglasnost, which is engaged in environmental protection, insists on closing down the nuclear power plant, while Prof. Lyudmil Genov, chairman of the Power Generating Committee, argues that the technical condition of the reactors is as good as ever. An idea has been launched to feed the small nuclear reactors with gas. This will probably be rather expensive, but this possibility is worth studying, Prof. Genov said.

The government has not yet taken an official stand on the construction of the other nuclear power plant at Belene, but in most probability the project will be abandoned, Mr. Tomov said.



### Government To Stop Operation of Nonferrous Metals Works

AU0507071591 Sofia BTA in English 2255 GMT  
4 Jul 91

[Excerpt] Sofia, July 4 (BTA)—Today ecologists blocked the road between the towns of Plovdiv and Asenovgrad in central Bulgaria demanding the immediate closing down of the Dimitur Ganev Nonferrous Metals Combined Works, which is polluting the environment in the region. The Council of Ministers has decided to stop the operation of the combined works, the government spokesman, Mr. Yassen Indzhev, said today.

## CZECHOSLOVAKIA

### Cost of Ecological Damage by Soviet Troops

PM1107101191 Moscow IZVESTIYA in Russian  
5 Jul 91 Union Edition p 5

[TASS report: "Damage Quantified"]

[Text] Prague, 4 Jul—The ecological damage resulting from the Soviet troops' stay in Czechoslovakia runs to nearly 3.5 billion korunas, Vaclav Vucka, Czech Republic deputy environment minister and head of the Czechoslovak part of the Czechoslovak-Soviet mixed commission on ecological aspects of the withdrawal of Soviet troops from the territory of Czechoslovakia, told journalists at a press conference Wednesday.

In the Czech Republic, he said, the damage amounts to approximately 2.5 billion korunas, and in the Slovak Republic it is around 1 billion korunas. The worst ecological damage is pollution of underground water. Milovice, where the Soviet troops' headquarters was and where they were garrisoned, is considered to be the worst affected region in the Czech Republic.

The scale of the damage will be discussed at talks with the Soviet side. If there is any dispute, the scale of the damage to each region's ecology will be determined by an independent international arbitrator. So the possibility of the aforementioned figures being amended cannot be ruled out.

### Environment Minister Outlines Ecology Laws

AU1207132391 Prague SVOBODNE SLOVO in Czech  
11 Jul 91 p 4

[Report on interview with Josef Vavrousek, minister-chairman of the Federal Environment Committee, by an "(ovs)"-signed reporter; in Prague on 10 July: "The Keys to Europe"]

[Text] On Monday [8 July] the Federal Assembly adopted, by an overwhelming majority, a law on atmospheric protection. Yesterday J. Vavrousek, minister-chairman of the Federal Environment Committee, gave

us more details on the law's origin, on other legal regulations, and on the preparations for a law on the environment.

The law is in complete harmony with the legal norms adopted by the European Community countries, and it could be said that it is one of the keys to Europe's gates. Specific decision-making is within the jurisdiction of the Czech and Slovak Governments. Next week normative measures and a list of pollutants (there are eight million of them throughout the world) will be drawn up. The pollutants will be divided into eight categories. Sources of pollution (from electricity generating plants, heating plants, and cement plants to timber processing plants) should be specifically determined and emission limits for all sources—with specific limits for some sources—should be determined regarding World Health Organization materials.

As far as the law on waste is concerned, a law the Slovak side became so agitated about, Minister J. Vavrousek said that it is in order, the Federal Assembly has adopted it, and now everything depends on the timely categorization of waste and the rapid establishment of a state administration. The law should be valid as of 1 September, and it is high time that this was done. J. Vavrousek pointed out that, in connection with privatization, everyone is now trying to export waste to our country. For example, inert material from German mines is now, allegedly, being imported to fill in exhausted mines in Kladno. As of 1 September this will not be possible. Supervision—and, as the case may be, permission—will be within the jurisdiction of the Czech Environment Ministry.

The last of the three "ecological laws" will be the law on the environment, which is currently going through the comments procedure. It should be a constitutional law for which a three-fifths majority will be necessary.

### Federal Assembly Passes Environmental Protection Law

LD0907192691 Prague CTK in English 1332 GMT  
9 Jul 91

[Text] Prague July 9 (CTK)—The Czechoslovak Federal Assembly (parliament) passed an environmental protection bill today replacing legislation in effect since 1967. The new law allows the individual republics to fine polluters up to 1,000 million USD [U.S. dollars] for any violation of its provisions.

Josef Vavrousek, minister-chairman of the Federal Committee for the Protection of the Environment, said pollution is one of the worst problems confronting Czechoslovakia. He said one half of the population in the Czech Republic and one third of that in Slovakia live in a heavily polluted environment.

Vavrousek said the new law conforms to standards set by the European Community and the World Health Organization.

### Ministers View Constitutional Provisions on Environment

AU1007191891 Prague CESKA A  
MORAVSKOSLEZSKE ZEMEDELSKE NOVINY  
in Czech 9 Jul 91 p 2

[CTK report: "The Prime Ministers on the Environment"]

[Text] Prague—A consultative meeting was held in the Office of the CSFR Government in Prague yesterday on the interpretation of Article 21 Letter a) of constitutional law No. 556/1990 on the Czechoslovak Federation. CSFR Prime Minister Marian Calfa, Czech Prime Minister Petr Pithart, Slovak Prime Minister Jan Carnogursky, CSFR Deputy Prime Minister Pavel Rychetsky, Josef Vavrousek, minister-chairman of the Federal Environment Committee, and other representatives took part in the meeting.

In regard to including the government's draft law on atmospheric protection in the 16th joint CSFR Federal Assembly session, the meeting's participants discussed principles for a single course of action in interpreting the stipulations contained in Article 21 Letter a) of the constitutional law on the Czechoslovak Federation. According to it, the "legal regulation of principles for the environment" comes within the Federal Assembly's jurisdiction.

The meeting's participants were briefed on the resolution adopted by the Slovak National Council (SNR) Environment and Nature Conservation Committee following its joint meeting with the Czech National Council (CNR) Environmental Protection and Urbanism Committee held on 17 April 1991. They were also briefed on the criteria laid down in this resolution for dividing federal and republic legislature responsibilities in the environmental sphere.

Those present agreed with the criteria laid down in this resolution. According to it, federal legal regulations in issues connected with the environment should correspond to the contents and substance of the European Community's common legal regulation in the given sphere. This is binding for all 12 countries in this community. These regulations should also respect the different stages of development in the CSFR and the EC. The state administration's legal regulation on environmental protection is a matter for the CNR and the SNR except in executing state supervision in the nuclear safety sphere. The federal regulation must not restrict the republics' right to create a specific arrangement for the state administration's protection of the environment.

The meeting's participants agreed that it is possible to regard the above-mentioned criteria as a supplementary criterion for the interpretation of Article 21 Letter a) of the constitutional law on the Czechoslovak Federation.

The government's draft Federal Assembly law on protecting the atmosphere from pollutants must also be considered in accordance with the above-mentioned criteria.

The meeting's participants agreed that a commission involving the federal and republic environment ministers and the chairmen of the national council and Federal Assembly environment committees will be established. It will consider whether the adopted and forthcoming Federal Assembly laws in the environmental sphere correspond to all the above-mentioned criteria. This commission will inform the Federal Government, the republic governments, the CSFR Federal Assembly Presidium, and the national council presidiums of its point of view.

### Phenyl Water Leak Pollutes Bilina, Labe Rivers

LD0907082191 Prague Federal 1 Television Network  
in Czech 1730 GMT 8 Jul 91

[Summary] A serious breakdown of the phenyl water collection tank No. 12 occurred in the compression gas works at Uzin in Usti nad Labem on Sunday, 7 July. A sudden and intensive leak of phenyl water caused an overflow of the protective reservoir. Some of the phenyl water leaked into the Podhorsky and Zirnicky streams. The polluted water then flowed into the Bilina and Labe rivers. Cleanup work continues. There are four underwater barrages on these waterways, and the whole area is considerably contaminated with tar. The extent of the ecological damage beyond the state border, where the Labe flows into Germany, is not yet clear. It is being investigated by experts and security organs.

## HUNGARY

### Hungary, Soviets Differ on Troop Withdrawal Damage Costs

LD0707152591 Budapest Kossuth Radio Network  
in Hungarian 1000 GMT 7 Jul 91

[Excerpt] [Announcer] Soviet environmental protectionists have admitted that the army caused damage in Hungary, but not to the value of 60 billion forints. As was made public last week, they admitted to damages of 3-3.5 billion forints. The Ministry of Defense did not react to this. Can Colonel Gyorgy Keleti confirm that the Ministry of Defense has accepted this statement?

[Keleti] Not at all, we did not accept it. We say that there is need for further meetings during the summer, where we would discuss the matter, in order to prepare further talks. The fact that the Soviets stated this figure, this sum, and they questioned certain Hungarian calculations, does not mean anything in our opinion.

[Announcer] Did the 60 billion claim which the Hungarian party confirmed earlier stay the same during the talks? Did our government not allow any movement from the 60 billion?

[Keleti] The issue here is not that the government is demanding this money but that competitive experts established with scientific methods the scale of the damage which the Soviets caused here. On the basis of the current regulations and various calculating methods, they established that this sum is needed to restore this damage. Our view is the following in this matter: over a period of a few years, and in several places in the course of a few months, when they were executing the withdrawal, they caused very serious environmental damage. We cannot allow the restoration of this to go on for several hundred years. [passage omitted on the Soviets' proposal for cheap ways of restoring the damages]

### **Minister Views Environmental Protection Achievements, Tasks**

AU0307082291 Budapest UJ MAGYARORSZAG  
in Hungarian 29 Jun 91 pp 1, 5

[Interview with Sandor K. Keresztes, minister of Environmental Protection and Settlement Development, by Attila Vodros; place and date not given: "The Gigantic Power Station Does Not Burden All Our Contacts"]

[Excerpts] If we do something in the area of environmental protection, it is possible that the results will only emerge after many years, like when we plant a tree. It is true that a young tree also requires thorough soil preparation before planting; in other words, we must lay the foundations for its future. During the past year, the Environmental Protection Ministry worked on unifying the natural and man-made elements of the environment. We asked Sandor K. Keresztes about the achievements of the past year.

[Correspondent] *The question is almost customary: What did your ministry achieve during this past year? Are you satisfied with your ministry's activity and your own work so far?*

[Keresztes] I do not think my answer will be special. Satisfaction? Far from it! However, just like everything else, this issue should not be viewed unilaterally either. After all, this ministry has changed radically in the past year. Naturally, this transformation could not take place overnight, but it was an energy- and time-consuming process. [passage omitted]

[Correspondent] *Is this transformation compatible with the European model and the requirements of adjusting to Europe?*

[Keresztes] Environmental protection has natural and man-made elements. We wanted to unify these elements and we succeeded in this. Our ministry's structure is similar to that of the Finnish, Dutch, or Spanish environmental protection ministries.

[Correspondent] *Socialist environmental protection was lenient toward itself and our neighbors alike.... Has this situation changed?*

[Keresztes] Before answering this question, I must point out that environmental protection is but one of the many activities of our ministry, albeit a decisive one. It is extremely important that we succeed in making progress in the environmental protection of some regions with our Slovak colleagues, like the Borsod industrial area and the Kassa area. It is almost impossible to solve certain issues only from there or from here. Naturally, the river barrage affair is burdening our relations, but this problem does not affect the activity of the protection of the environment in the aforementioned regions and in other areas. We are only at the stage of exploratory talks with our eastern and southern neighbors. During the Ukrainian president's visit to Hungary, we formulated our cooperation requirements with a view to the fact that Szabolcs-Szatmar-Bereg area is struggling with innumerable problems and these problems could also affect the areas beyond our border. Innumerable opportunities could also be exploited in Hungarian-Romanian relations, but we are only at the stage of exploratory talks with them. Unfortunately, we have not yet succeeded in holding genuine talks with our southern neighbors, although it is worth mentioning that we made it clear we were not interested in the construction of a river barrage system on the Drava River. Our government-level relations have developed well in the past year; we are operating a settlement development organization on Austrian territory. In future, this will serve as an example for a system of relations to be set up with other neighbors. [passage omitted]

[Correspondent] *It seems that the air has become somewhat chilly around your ministry lately. What I have in mind here is that soldiers are regularly talking about the environmental effects of the presence of Soviet troops here....*

[Keresztes] The issue of the Soviet troops is different. Intergovernmental negotiations have been underway in which our ministry has been very active, but the soldiers are the ones who represent us. You said that there was silence around our ministry. That is true, and it bothers me that the press was very loud one year ago when this ministry was in the middle of reorganization, and now when we can already come up with results, the press is quiet. At that time, the press tried to exaggerate and expose personal conflicts. Journalists assaulted us at that time because they smelled a scandal. Personally, I would appreciate it if the press dealt more with our ministry, including our genuine work. We only have initial results, and our main achievement is that we are starting to emerge. This relative calm will hopefully bring back professional people whom we need very much. [passage omitted]

### **Ineffectiveness of Budapest's Anti-Air Pollution Efforts Noted**

91WN0541A Vienna DIE PRESSE in German  
10 Jun 91 p 18

[Article by Tibor Fenyi: "Record Smog on Earth Day: Budapest Air Critically Polluted"]



[Text] Budapest—"Ladies and gentlemen, we are having a beautiful day today. Air pollution is only two and one-half times above the limit which is dangerous to your health." That is how radio programs usually start in Budapest these days and the city's inhabitants have come to accept the fact that air pollution in their city is "tops" in Central Europe.

Earth Day last week was a case in point. Lord Mayor Gabor Demszky had kicked off a campaign to improve air quality in the capital on this particular day at least. Television and the press asked the residents of the city to leave their cars at home if possible and to use public transportation instead. The result was that the traffic jams in Budapest were bigger than ever. All car owners were convinced that the other fellow would leave his car at home.

Euphemistically speaking, the ecological awareness of the citizens of the former communist countries has "not yet attained the desired level." No wonder—after all the former regimes kept all threats to the environment secret. The assumption was that there was not enough money to deal with the ecological damage anyway. Under the circumstances, the communists concluded, "there was no point alarming people." As a result, the level of air pollution was still considered a state secret only a few years ago.

Industry was the primary cause of air pollution. Factories were state property and there was a chronic shortage of budgetary funds. As a consequence, environmental protection was placed on the back burner.

In addition to the factories, it is vehicular traffic which causes air pollution. This is due at least in part to the centralized transportation system in Hungary. At present, virtually all East-West traffic reaches up to the Budapest city limits. No Danube bridges have been built to the north and south of the city. Only 10 kilometers of the M-6 beltway around the capital have been completed; the project will not be finished for about another 20 years.

For another thing, most of the cars and trucks are old and were built in Eastern countries. In other words, they do not comply with present air quality standards. Drastic increases in customs duties which went into effect on the first of the year have made automobiles too expensive for the average Hungarian. The remaining cars on the road are decades-old "Trabis" [East German Trabant]. There are no catalytic converters available for these models as yet and the lead content of Hungarian gasoline is among the highest in Europe.

Although the Antall government is aware of this catastrophic state of affairs, it can scarcely do anything to remedy it in view of the gloomy economic situation. Under the circumstances, it prefers to breathe the polluted air rather give up its customs revenues.

The Budapest city administration is similarly helpless. It is simply incapable of taking a firm stand against the

factories and automobiles which are causing the pollution. Environmental activists were not even able to get a ban passed on the sale of bread, fruit, and vegetables on the sidewalks in the heart of the city. It is argued that there are not enough shops but there are protests against plans to restrict sales.

Meanwhile, doctors have come up with evidence that the lead content in the bloodstream of children living in the inner city is at least five times above the danger level.

## POLAND

### Ecological Threats Facing Republic Outlined

91WN0457A Warsaw POLSKA ZBROJNA in Polish  
17 Apr 91 p 3

[Article by Dr. Stefan Kozlowski, professor at the National Geological Institute in Warsaw, lecturer at the Higher Pedagogical School in Opole, and deputy chairman of Sejm Commission on Environmental Protection, Natural Resources, and Forestry: "Poland's Ecological Security"]

[Text] At the Academy of National Defense, a research topic entitled "The Defense System of the Polish Republic" is currently being implemented. In January 1991, a seminar was held in Rembertow devoted to the concept of the organizational and functional premises of the Polish Republic's Security Council. The problem matter involving six potential threats facing Poland—political, military, economic, internal, psychological, and ecological—was presented at this seminar.

This last type of threat is perhaps the least understood and requires a more precise explanation. This is all the more crucial that to a large extent we are beginning to talk about the doctrine of security of the Polish Republic. The National Security Council has been appointed under the leadership of the president. Thus, what ought to be said about the current ecological threat to Poland?

### Ecological Aggression

We can refer to internal as well as external (foreign) aggression. Poland finds itself under very strong external pressure. Large amounts of air pollution reach Poland, mainly from a westerly and southerly direction. It is estimated that of the total amount of sulfur dioxide that falls on Polish territory, as much as 55 percent comes from abroad. The ratio with regard to nitric oxides is even more unfavorable because 75 percent of them falling on our country are from foreign sources. These figures reveal how greatly Poland is subjected to other European countries. The pollution flowing in from a south-westerly direction causes, among other things, the current disastrous state of our mountain forests. Forests in the Sudeten and Carpathian mountains in altitudes starting at approximately 700 meters above sea level are



dying out. The inflowing pollution radically worsens the safety of human health in the areas of Upper Silesia and the Turoszow Basin.

The second type of external aggression is the pollution of rivers that subsequently flow throughout the territory of Poland (the Bug, Oder, Biala Glucholazka, and many others). This pollution is persistent in character, and it lowers, for example, the quality of drinking water in Warsaw, or it occurs in a hazardous form. The catastrophic contamination of the Oder with petroleum-derived products has been well documented. Poland does not have an appropriate detection/warning system at its borders with regard to approaching waves of contaminated water. The process of responsibility and compensation for detriment originating from within the borders of a neighboring country is not properly regulated.

The third type of aggression pertains to the shipment of toxic substances to Poland for processing or storage. West European countries are having increasingly greater difficulty in disposing of toxic substances. Strict ecological regulations in these countries prevent the storing of waste, while making their use very costly. For this reason, pressure has been mounting on our country for many years to accept toxic waste (sludge from ports, ash, as well as all kinds of substances from the chemical industry). Many of these substances are brought in to our country as raw material for the production of cement, paint, and so forth.

Attempts are constantly being made to ship useless toxic substances under this guise. The customs services, the Border Guard, and the State Environmental Protection Inspectorate [PIOS] are working in cooperation with each other to combat the importing of waste to Poland. However, this frequently requires appropriate analytical-control testing conducted by PIOS or by the State Sanitary Inspectorate.

In October 1990, the border-protection services were equipped with portable dosimeters for checking radioactivity in transported products. A large number of offers have been made to Poland in the last year for storing waste, including radioactive waste, or for disposing of it primarily by burning. According to PIOS data, during the period between July 1989 and January 1991, these offers concerned at least 18 million tons of waste. This demonstrates the extent of the process. Despite the statutory ban on importing waste, such attempts are renewed, and at times the incoming transports are returned. It ought to be expected that this threat will gradually increase, in view of the growing external pressure and the continually weak legal enforcement of regulations in Poland, as well as negligible ecological awareness.

The fifth [as published] type of ecological threat from the outside is associated with nuclear disasters. The threat made itself well known after the nuclear reactor accident in Chernobyl. Because Poland is surrounded by nuclear

power plants (in the USSR, Czechoslovakia, and Germany), this is an ever-present threat. Power plants of the Chernobyl-type situated in the European part of the USSR are particularly dangerous.

Thus far, we have devoted our attention to problems of external aggression. However, we can also talk about internal aggression. The state of the natural environment in Poland is worsening constantly as indicated by the GUS [Central Office of Statistics] published annual reports. The resistance of the natural environment to emerging threats such as air and water pollution and soil contamination is systematically decreasing. The collapse of equilibrium in the particular ecosystems occurs more and more frequently. The removal of the environment's natural barriers of resistance leads to the rise of ecologically threatened areas and in extreme case to ecological disaster.

It is estimated that approximately 10 percent of the country's surface area is composed of ecologically threatened areas, i.e., areas with constantly surpassed allowable standards for air and water pollution and soil contamination. Internal ecological threats may also come about as a result of improper military activity. In 1990, the State Environmental Protection Inspectorate published a report on the effect on the natural environment of Soviet army units stationed in Poland. On the basis of an initial inspection of nine garrisons, widespread contamination of the soil and underground water with petroleum derivatives was found. This type of contamination constitutes a direct threat to drinking water intakes in, for example, Swinoujscie. The devastation of the natural environment is caused by:

- Improper fuel policy and management.
- The lack of sewer treatment plants.
- The lack of appropriate waste management.
- Lack of clean air protection installations.
- The excessive emission of noise and electromagnetic radiation.

Such severe weakening of the resistance of the individual ecosystems' functioning is dangerous in case of any further sources of pollution or threat. A country that is ecologically weakened is not able to protect itself against the effects of possible warfare. The ecological disasters that appeared during the war for Kuwait indicate how very dangerous and long lasting they can be.

#### The Threat to the Health and Lives of Poles

It is estimated that currently one-third of the inhabitants of Poland live in ecologically threatened areas. We have 27 regions where the allowable norms for air and water as well as soil contamination are constantly being surpassed. The most dramatic situation occurs in Upper Silesia, followed by the region of Krakow and Legnica-Glogow. The results of health studies conducted in those regions were suppressed for many years. The material

published at SGGW [Main School of Rural Economy] within the framework of Program 04.10 reveals the significant shortening of the life expectancy of the residents of Upper Silesia. Many factors contribute to this:

- The high mortality rate among infants.
- Poor state of health of infants and children who are the most exposed to environmental effects.
- Increasing morbidity rate, and particularly respiratory ailments and malignancies.

Studies conducted by Prof. Chorazy have revealed injury to the genetic code of residents of Upper Silesia. Retardation in the mental development of children because of, for example, contamination of the environment has been determined. Therefore, it should be stated that in Upper Silesia a young generation is growing up with permanent physical and mental defects. Consequently, we can speak of threats to the national well being in many regions of the country.

Conducted studies and published reports have found that people should not live in many areas, and especially should not grow and produce food in those areas. This concerns in particular many central regions in Katowice Voivodship, in many villages surrounding the Sendzimir Steelworks near Krakow, in villages surrounding the Glogow and Legnica Steelworks, as well as in villages in the Turoszow Basin. Despite a good awareness of the hazards, appropriate remedial measures are not being undertaken by the Ministry of Agriculture and the Ministry of Health. The imperiled residents do not receive information about possible preventive measures leading to the lessening of the danger.

#### State of Ecological Defense

The concept of ecological defense is now well known. This is due to many factors, namely:

- The assumptions of a state ecological policy are just now to be looked into in the Sejm. The Sejm Environmental Protection Commission is demanding that these assumptions be expanded to include, among other things, the problems of ecological defense and security.
- Drafts of six ecological laws that are to regulate this state of economic activity have not as yet been forwarded to the Sejm.
- Poland does not have a system of an actively functioning "ecological police." The bill regarding a State Environmental Protection Inspectorate was rejected by the previous administration.
- We do not have regional structures of environmental protection service.

Thus, we can speak of a high degree of defenselessness on the part of Poland against ecological aggression. This is a highly disturbing situation in the face of the mounting

scope and degree of ecological threats. Counteraction must be expressed not only in legislative-organizational solutions, but also a huge role should be played by widespread awareness of the imminent ecological dangers. The state of this awareness is very low in our country as compared with West European countries.

Ecological defense should be geared toward external and internal threats, toward peacetime and wartime threats. Primary emphasis should be placed on the current peacetime threats. The mounting ecological aggression requires decisive action. In the 1990's we can expect further regional ecological disasters. These disasters may involve the following:

- Toxic contamination of water supplies in large urban areas.
- Regional soil contamination with heavy metals, preventing the production of food goods.
- Chemical contamination resulting from industrial and transport accidents on a local scale.

In addressing these problems, the National Center for Contamination Analysis was formed under the Ministry of Health. It was formed on the road to reaching an understanding with civil defense. However, this center's legal, organizational, and technical possibilities are incomparably small in relation to the anticipated tasks. The state of Poland's ecological security system is poorly discerned. The proposed plan of studies on this subject has just now been introduced by the Institute of Industrial Medicine in Lodz and is to be completed in 1993. This example demonstrates how very much behind we are in our research and organizational work. Among the most pressing tasks are the reorganization and strengthening of the State Environmental Protection Inspectorate. It is anticipated that the Voivodship Centers for Environmental Research and Monitoring as well as the Central Laboratory for Radiological Protection will merge with PIOS. Only in such an organizational form can PIOS implement the numerous tasks precisely detailed in the bill, which has been waiting for acceptance by the government for a year now. The lack of an efficiently functionally "ecological policy" is currently the weakest point of our ecological defense system.

The military can play a significant role in ecological defense. We have numerous positive experiences in this regard. For many years now, the Polish Army has been working in cooperation with the League for the Conservation of Wildlife. Numerous activities are being undertaken for the improvement of the state of the environment, e.g., on site on military testing grounds.

Ecological defense should become an important task for the new model of our Army. Its technical and organizational potential can and should be geared to a significant degree toward the elimination of threats and the improvement of our living environment.

### Ecological Awareness Is Necessary

The very low level of ecological social awareness [in Poland] poses a great threat to ecological security. In comparison with West European countries, the degree of ecological awareness is very low in our country. In no other area are civilization delays as glaring as in the case of broadly understood ecology. The lack of this awareness is an additional source of threat and the cause of much local deterioration of the natural environment. This is also the cause of the constantly worsening health conditions in the lives of the members of our society.

The low ecological awareness is tied to, above all, the antiquated system of both formal and informal education. The results of the first Forum on Ecological Education, which deliberated in the Ministry of National Education on 23 February 1991, reveal this. From the published material presented at this forum, it follows that:

- No Polish university offers a curriculum dealing with environmental protection—this pertains in particular to the humanities.
- Young people in vocational and technical schools do not receive any kind of instruction in the area of environmental protection.
- In 1989, the subject, "Protection and Shaping of the Environment," was dropped from secondary school programs.

It should, therefore, be stated that the present young generation is not prepared to solve the basic problems of survival with which it will have to deal at the turn of the 21st century.

### Conclusions

The state of the country's ecological security is greatly alarming. The ecological threat, which has been mounting for many years, is posing an increasing threat both to our economy and our health. The peacetime ecological dangers have their national as well as foreign magnitude. Poland is particularly exposed to external aggression. Therefore, it is in Poland's interest to bring about as soon as possible the renegotiation of our international treaties in the area of ecological security.

Recently, greatly far-reaching possibilities of cooperation with Germany have been outlined, and this should lead to significant improvement in the situation on the western side. The southerly and easterly direction

remain to be regulated. Of particular importance here is the closing down of unsafe nuclear power plants (graphite of the Chernobyl-type).

The second sphere of activity must be geared toward accelerating the national legal-organizational undertakings. In 1991, the principal ecological laws should be approved by the Sejm. The creation of an efficient ecological policy that would also encompass radioactive threats is indispensable. The acceleration of work on the creation of state environmental monitoring is necessary. The creation of a computational command center for the environmental monitoring system is indispensable. This will enable, for example, the announcement of smog alerts in large urban-industrial centers. Thorough changes are needed in ecological education of our society. The Ministry of National Education should create a center for ecological education and work out a new concept of education in grade, secondary, and higher schools.

The presented conclusions point to the need for a rapid adoption and implementation of a state ecological policy. The resolution of the Sejm is necessary in this matter. The creation of a state ecological policy is indispensable in the current political-economic situation. We have lost 17 years (1972-89) on fruitless discussions on the form of the National Environmental Protection Program, which was ultimately eliminated from the Sejm by the Ministry of Environmental Protection, Natural Resources, and Forestry. In place of the program, a state ecological policy was presented. The policy imposes numerous tasks and responsibilities on the particular ministries.

It should be expected that the current administration will be capable of proceeding with the implementation of the tasks intended to improve the ecological security of Poland.

### Ecological, Green Parties Form Coalition for October Election

LD0707173291 Warsaw Radio Warszawa Network in Polish 1600 GMT 7 Jul 91

[Text] The Polish Ecological Party [PPE] and the Polish Green Party [PPZ] have in the course of a meeting of their membership groups in Warsaw created an electoral coalition. A joint program and also an electoral staff were established as well. The delegates also expressed support to the youth organizations struggling for the protection of the natural environment, including those participating in the Dam the Dam action in Czorsztyn. A protest was also raised against methods used in relation to the protesting young people.

## ROMANIA

### **UN-Romanian Convention on Minimizing Pollution Hazards Signed**

*AU1107190391 Bucharest ROMPRES in English  
1754 GMT 11 Jul 91*

[Text] Bucharest ROMPRES 11/7/1991—A convention was signed Thursday, 11 July, in Bucharest between the United Nations Development Programme (UNDP) and the Romanian Environment Ministry on a "plan of action to minimize industrial pollution hazards."

The project includes environmental evaluation in four severely polluted areas (Valea Calugareasca, Onesti-Borzesti, Midia-Navodari, Baia Mare-Zlatna), plans of action and guidelines for a lasting industrial development, also plans for environmental rehabilitation in the affected areas and training of Romanian environmentalists for similar projects in other parts of Romania.

The final scheme was worked out by the Romanian Environment Ministry, submitted for approval to the UNDP Committee and has recently been approved for UNDP funding, while Romania undertakes to put it into practice. The scheme in question is the first of this kind developed with UNDP assistance.



## REGIONAL AFFAIRS

### Brazil Proposes Joint Amazon Indian Protection Plan to Venezuela

PY0307174591 Madrid EFE in Spanish 2252 GMT 28 Jun 91

[Text] Brasilia, 28 Jun (EFE)—Brazilian Justice Minister Jarbas Passarinho has reported that on Friday, 28 June, Brazil made a proposal to Venezuela for jointly protecting the 15,000 Yanomami Indians who live in an Amazon area shared by the two nations.

The minister also announced the provision of several million dollars for the demarcation of the 9.4 million hectares of the Amazon where these indigenous Brazilian people live.

Passarinho made the announcement after Planalto Palace meeting on matters dealing with the Yanomami, who have been affected by several epidemics and by the indiscriminate action of gold miners.

President Fernando Collor today appointed a technical commission for environmental projects. The commission will be funded with \$100 million for its work.

The Brazilian Government wants to convert annually \$100 million of its debt to commercial banks into environmental preservation programs, but no conversion methods or terms have yet been established.

The commission will be headed by Economy Minister Marcilio Marques Moreira and will be made up by, among others, Foreign Minister Francisco Rezek, Environment Secretary Jose Lutzemberger, and Strategic Affairs Secretary Pedro Leoni Ramos.

## BRAZIL

### Collor Approves Plan To Trade Foreign Debt for Environmental Projects

PY0207184691 Brasilia Radio Nacional da Amazonia Network in Portuguese 1000 GMT 2 Jul 91

[By Luis Augusto Mendonca]

[Text] President Fernando Collor has approved a plan to swap foreign debt for environmental projects. In accordance with an experimental program for the conversion of \$100 million of the Brazilian debt into environmental preservation projects, a foreign company interested in taking part in the program can do so by buying foreign debt papers and donating them to public or private Brazilian foundations. Foreign companies can also choose the environmental project in which they want to invest money. The foundations will receive a title in perpetuity, which is still to be created, from the Treasury. If or when a foundation is dissolved, this title in perpetuity will return to the government.

After meeting with President Fernando Collor, Economy Minister Marcilio Marques Moreira said that the government will not accept any conversion unless it is done through donations.

[Begin Marques Moreira recording] Some other proposals have been made, but they will not be approved. The swap can only be made through donations or operations aimed at privatization because, otherwise, inflation would result and we cannot agree to that. We are currently implementing a very strict, austere monetary policy; therefore, any other type of operation is excluded. [end recording]

The environmental preservation projects will be evaluated by a commission made up of the economy and foreign ministers and the environment and technology secretaries.

## CHILE

### Health Officials Asked To Study 'Toxic Cloud' in Valparaiso

PY0307154591 Santiago EL MERCURIO in Spanish 26 Jun 91 p C7

[Text] Valparaiso—On 25 June regional officials decided to ask the Health Ministry to send a monitoring unit to check for toxic elements in the air to establish their origin and cause. This situation which occurred 25 June for the third time in this port has been identified by this community as a "toxic cloud."

The people who live on Riofrio and Alcalde Barrios Streets, near the Playa Ancha soccer field of the University of Playa Ancha and Cemetery No 3, reported to the media that from 0900 to 1000 they felt a burning sensation in their eyes and throats, and they suffered breathing problems. They also smelled sulfur.

Dr. Waldo Vidal Alvarez, deputy director of the Valparaiso-San Antonio Health Service, went to that district to talk to the people. He then said that the burning sensation was caused by a sulfurous anhydride of unknown origin.

He said that this occurrence was not as strong as the previous two because it did not effect the majority of the population.

The first occurrence of the so-called "toxic cloud" had particular characteristics because it was necessary to take 30 people, mostly students, to a health center.

About two weeks ago a similar event occurred in the higher areas of Vina del Mar. Its cause was also unknown but the accusations were aimed at the large industrial centers.

Waldo Vidal said that scientific and technical research should be carried out on these occurrences and that, to that end, the Health Ministry will be requested to install a monitoring unit.

## DOMINICAN REPUBLIC

### Lack of Seeds Hindering Reforestation

91WN0511C Santo Domingo LISTIN DIARIO  
in Spanish 14 May 91 p 1

[Article by Santiago Estrella Veloz]

[Text] The forest crisis in the Dominican Republic is such that there are not even sufficient seeds to replant, even if a massive program to do so were initiated at this time.

The lack of high quality seeds has forced private entrepreneurs to import millions of pine seeds from Cuba and Honduras, as well as species of trees from Haiti, the United States and Australia.

That is because the few seeds that can be obtained here are from "degenerate" trees. In the case of the pines, for example, the lack of fertilizer and maintenance has resulted in the proliferation of diseases, so for those seeds there are no guarantees.

The same has occurred with native species of other trees, many of which are on the road to extinction, both softwoods and fruit trees. If a forest entrepreneur now requires, for example, five million pine seedlings and an equal number of fruit trees, he would have to wait to import the seeds and germinate them, a process that could take months.

Los Arbolitos S.A., a Dominican company with an installed capacity to produce ten million plants per year, has been forced to import Cuban pine seeds of the "Sierra Maestra" variety, a type of "Occidentalis" pine that grows on our island, in order to satisfy a client. Seedlings from those seeds are now growing rapidly.

Los Arbolitos S.A. President Engineer Bernabe Manon believes that the country needs to plant 40 million trees per year to reforest and replace those cut for charcoal and firewood. If cutting were not allowed, they would have to be grown on energy farms created and approved for that purpose.

Manon proposes the idea of a seed bank, which in his view would be "very expensive," but would lead to a "reordering of forest resources."

"What are we producing now? Bad quality seeds, because we collect from anything that comes up, and in terms of forestry that is an aberration," the forest official and entrepreneur adds.

Manon believes that a seed bank should be staffed with highly qualified personnel, who would initially select the mother plants from existing species in the country, to obtain the seeds and supply the nurseries and other interested parties.

"A seed bank is extremely expensive, but much less so than to be seeding just any sort of nonsense that we know will die, frustrating the country's efforts to reforest and produce," Manon said.

But in any case, it is necessary to import seeds, since there are not enough to make what are called "rodales," which are nothing more than forest development farms to produce seeds, and which must necessarily be promoted by the government, he said.

Manon said that these seed plantings and research could occur in a tripartate manner, between the government, the private sector and the universities.

The businessman cited the case of Los Arbolitos S.A., which was paralyzed for eight months by a contract it is now trying to fulfill because it had to reforest part of the Nizao riverbank with native trees "that do not exist." That was to protect the Jigüey-Aguacate dam, in its final phase of construction.

"That problem is giving us an enormous headache, but will be resolved when there is a seed bank in the country," said Manon.

His company, located on km 47 of the Duarte Highway, near Villa Altagracia, is six years old.

At this time, millions of pine, acacia, eucalyptus, oak, oxhorn and other seedlings for reforestation are growing in the nurseries using modern technology, considered the best in the Caribbean.

But there are also hundreds of thousands of coffee and fruit seedlings, which constitute a collateral commercial activity. That is another story.

## GUATEMALA

### Destruction of Peten Rain Forest Continues

91WN0540B Guatemala City SIGLO VEINTIUNO  
(ECOSISTEMA SUPPLEMENT) in Spanish  
27 May 91 p 3

[Report on interview with Jorge Perroni, vice president of the First Forestry Congress (September 1990) Board of Directors, by Edgar Estrada; place not given]

[Text] It is truly difficult at the present time to formulate any proposals about developing resources in reserve areas of the Maya Biosphere in the face of all the political-economic-conservationist factions and the fanatical "armchair" pro-conservation attitude, Perroni says.

In spite of this fact, it should be emphasized, whenever the opportunity arises, that if the proper political conservation structure has been created at the governmental level, care should also be taken to make it reflect the realities of our development situation and the very urgent needs of our people, in the case of Peten.

For over 30 years, this department has been the target of the most incredible projects. It was depicted as the perfect area for the development of livestock raising in the country, but the forests would have to be cleared in order to make way for grazing land. Next, the department was to become the breadbasket of Guatemala, and the basic grains in particular would be grown, signifying the consistent and tragic destruction of the forests. Now the department is being split in two so that half may be devoted to conservation of its natural resources in general. It is a magnificent decision that was unfortunately not taken until 1990, but we do not think it is too late if the legal decision remains firm, clear, and nationalistic, Perroni explains.

Nevertheless, we should take a close look at the actual situation:

- Within a one-year period, a master plan governing the administration, conservation, and utilization of the area's natural resources was to be drafted and put into effect, but this has not been done.
- An anarchic situation prevails on the reserve in terms of the use of forest resources such as chicle, xate, and other products, with the traditional empiricism and lack of control. Furthermore, the very institution that is supposed to protect those resources is involved, as in the case of the marketing of chicle.
- The forest continues to be destroyed for agricultural activities such as corn planting.
- The finest types of wood are taken out of the forest, cut using chain saws and subject to no control whatsoever. In some areas, species are already becoming extinct.
- Large quantities of wood continue to be smuggled over the border, totally damaging the area's resources, ecosystem, fauna, soils, and so on. Blatant violation of our national sovereignty is tolerated and roads are being built penetrating our territory for several kilometers.

Based on the facts, these and other situations cause one to be totally skeptical about whether the reserve's resources can ever be preserved, Perroni adds.

In addition, we have lost the right to make a rational, controlled use of resources, an activity which would contribute toward their rational management.

It is of the greatest urgency that the government make immediate decisions to review policies regarding the conservation, preservation, and protection of these resources, as well as the attitude of those whose obligation it is to implement them. It must likewise look into the terms of outside financing, the laws themselves, the reality of our own needs, and the socioeconomic situation of our people.

### Action Urged To Prevent Deforestation of Alta Verapaz

91WN0540A Guatemala City *EL GRAFICO* in Spanish 9 Jun 91 p 6

[Text] Deputy Oliverio Garcia Rodas (UCN [National Union of the Center]) has called upon the Environmental Commission of the Legislative Assembly and Minister of Energy and Mines Carlos Leonel Hurtarte to take immediate action aimed at preventing the massive deforestation that is taking place in the Department of Alta Verapaz, which could do disastrous damage to the region's ecological system.

The problem is caused by some 1,000 cardamom dryers fueled by wood, which burn about 4 cubic meters of wood every 36 hours. In other words, in that same amount of time, 4,000 cubic meters of wood are being burned by all the cardamom dryers combined, which were switched from oil derivatives to wood due to the shortage of such oil products.

This action is the source of serious and irreversible deforestation and a resulting scarcity of rainfall, which in turn has caused the Chixoy hydroelectric plant to experience the lowest water levels ever in its reservoir.

### Coastal Area Residents Decry Destruction of Marine Life, Mangrove Swamps

91WN0540C Guatemala City *PRENSA LIBRE* in Spanish 20 May 91 p 8

[Text] In the face of the looting and destruction of the natural resources of Tilapa Channel in Ocos, San Marcos, residents who have witnessed the plundering of marine species and forest resources have requested the intervention of authorities to protect flora and fauna that are now becoming extinct.

Representatives of some 6,000 residents of the Pacific coastal area between El Manchon and Ocos have sent a memorandum to Minister of Agriculture Adolfo Boppel Carrera outlining the acute crisis they face as the result of the continuous looting of marine species and the destruction of mangrove swamps by unknown persons.

Those affected explain that the channel, which is several kms long, is protected by mangroves, the only such stand left in the country, but that in recent months, persons from other areas have begun to deforest the area.

They add that the pillagers have also caught and taken shrimp larvae from the channel in order to take them to shrimp sellers in the region, particularly Champerico, along with larvae of other species such as mojarras, porgies, and grouper, which they do not use and simply destroy, causing the wanton disappearance of schools of fish and shrimp.

They also explain that the irrational extraction of such species is authorized by the Ministry of Agriculture itself through the General Fishing Directorate (DIGEPESCA)

and they find it unjust that the meager economy of coastal dwellers should be affected to protect a few millionaires.

In one recent case, for example, a Navy patrol caught a number of larvae poachers who were turned over to a regional court, which subsequently released them with all their gear on orders from Minister Boppel Carrera himself.

We are in a closed season and if this is how things work during this period legally established for the protection of such marine species, residents wonder what will happen when it is open season.

They also appealed to the commanding officer of the Pacific Naval Base, Captain Anibal Giron, asking him, based on the reasons presented to the minister of agriculture, to set up a special Navy detachment to protect resources, for if the authorities do not intervene, the local people pledge to defend their resources even at the cost of their lives.

## HONDURAS

### Forest Fires Cause Extensive Damage

91WN0551A San Pedro Sula TIEMPO in Spanish  
3 May 91 p 20

[Text] More than 45,000 hectares of forest have been burned throughout the country, the result of about 2,000 forest fires set from the beginning of the summer season to the present date, according to officials of the Honduran Corporation for Forest Development (Cohdefor).

It was reported that one of the areas most affected by the fires is the Department of Gracias a Dios, where more than 16,000 hectares of forest were lost.

The number of fires in other departments was as follows: Olancho, 575 fires; Francisco Morazan, 372; Comayagua, 333; and Copan, 356. Teams from Cohdefor fought these fires and in some cases had the help of personnel from the armed forces.

Several factors have an impact on the propagation of forest fires. However, it was explained that the principal cause is the lack of awareness by Honduran peasants who, with malice aforethought, cause damage to the ecology and the environment.

It was stated that, despite the help of the armed forces in watching over the forests, no arsonist has been captured, due to the extensive size of the national forests.

## VENEZUELA

### Environment Symposium To Focus on Legislation, Municipal Participation

91WN0549A Caracas EL DIARIO DE CARACAS  
in Spanish 11 Jun 91 p 56

[Article by Maya Figueroa]

[Excerpts] Between June 1990 and June 1991, the Permanent Commission on the Environment and Land Use recorded 418 violations, of which 37.6 percent involved soil and environmental problems; 28.8 percent water problems (sewers, potable water, river pollution); 22.9 percent problems of a generic nature involving water polluted by toxic and industrial waste, soil, more water problems, and other things; and 10.8 percent air pollution problems (oil facilities, quarries, smog, and others).

Given this situation, the aforementioned commission has written a report providing an environmental diagnostic for the country, in which three major problems are highlighted:

#### 1. Environmental Cleanup

Characterized by pollution on the eastern, central and western seacoasts (the entire northern coast of Venezuela not including the black waters): - Water collection - Pollution of Lakes Valencia and Maracaibo, the Motatan and Orinoco Rivers, and increasing pollution of the Turimiquire and three other large rivers: Manzanares, Guarapiche and Neveri, which feed water to the entire eastern portion of the country. - 70 percent of the manually-operated water treatment plants in the ten cities visited require greater attention, as there is evidence of deterioration of the tanks, filters and/or water quality. - 35 percent of the population lacks aqueduct service.

#### 2. Land Use

Eighteen percent of the violations involve housing development where there should be agriculture, mining where there is housing development, and agriculture where there are parks. In the view of the Permanent Commission on the Environment, this whole situation results from the fact that state land use plans have not been approved in the territory.

#### 3. Forest Reserves

The current Forestry Law on Soils and Water authorizes deforestation of the forest reserves, which is leading to their depletion. For this reason, the reform of various articles of the law in question is urgently needed.

#### Meeting in Cumana

The Permanent Commission on the Environment and Land Use is cognizant that it cannot resolve everything, but it wants to know if the National Government accepts



its proposal for an overall plan in the short, medium and long terms, taking the country's resources into consideration.

The aforementioned commission, together with the Sucre State Government, is organizing the First National Antonio Jose de Sucre Municipal Symposium on Environmental Legislation, with the objective of translating environmental laws into land use planning, and in turn the governors could on that occasion sign legislation for land zoning, strengthening the municipal institution's role in defense of the environment, and more concretely, strengthen the monitoring and control efforts anticipated in the new Environmental Enforcement Law.

According to sources, the symposium will have four primary objectives: the first consists of analyzing the organizational needs implied in approval of the Environmental Enforcement Law, highlighting the possibilities for municipal institutions. The second involves exploiting the organizational strengths of municipalities for environmental management, and identifying their weaknesses. All this in the context of enhancing their participation in land use planning and in the respective plans and schemes.

The third objective seeks a change in environmental management methods, attempting to overcome the current normative planning process and moving toward true management strategies to create an impact on environmental reality. This also involves underpinning, at the local level, the Environmental Enforcement Law by generating initiatives and decrees of an environmental protection nature, and a series of feasible recommendations to improve the organizational culture of the municipality, to increase its effectiveness in environmental monitoring, and provide additional managerial linkages to the law. [passage omitted.]

To facilitate this process, plans are to stimulate the promulgation of environmental decrees with sanctions in various municipal councils around the country, in order to strengthen the law, creating valid precedents in which the communities, together with the Municipal Councils, can participate in development and seek assistance, and ultimately, social acceptance.

It is believed to be possible for the municipal councils to assist in enforcing these measures, in conjunction with the Environmental Protection Service of the Armed Forces for Cooperation, and the Monitoring and Enforcement Division of the Ministry of the Environment and Renewable Natural Resources [MARNR].

In the view of the aforementioned parliamentary commission, these activities will be completed, but not with the existing municipal councils, which face some impediments to fulfilling this role, such as lack of resources, capabilities and information, among others; rather, for the municipalities to assume these roles it is necessary to modernize their administrative and technical management, making more efficient their personnel selection, hiring and training systems; their accounting and financial information systems; and their legitimacy within the communities.

Decentralization of the environmental authorities is a legislative necessity, while the MARNR will exercise the functions of leader and guide for the major problems or projects, as well as develop national land use strategy. Nor does this invalidate the Parliament's legislative and monitoring activities, much less the powers of the courts and legislative assemblies; rather, it attempts to coordinate efforts for a common purpose.

Likewise, the proportional representation of political interests and civil society will permit a more democratic treatment of environmental problems, in which different opinions or focuses may be heard and contrasted and a search for consensus attempted, for the effective resolution of said problems.

## REGIONAL AFFAIRS

### Kuwait Oil Fires Cause 'Anomalous Weather' in Tajikistan

LD1507104691 Moscow TASS in English 0912 GMT  
15 Jul 91

[By TAJIK-TASS correspondent Galina Gridnyova]

[Text] Dushanbe July 15 TASS—Tajikistan's parliament has appealed to the Soviet Government, to the leaders of the Persian Gulf countries and to the United Nations Organisation, proposing a joint study of the influence and the consequences of oil fires in Kuwait on Tajikistan's environment [words indistinct] in all of the republic's newspapers.

"Anomalous weather conditions and a stable air shift from the Persian Gulf onto Tajikistan's territory as on all Central Asia give reason to assume that this is caused by fires on the Kuwaiti oil wells" - the document says. "The possible negative influence of large-scale Kuwaiti fires on the weather and climate of our region causes great concern, as well as their effect on the glaciers of the Pamir and Wyan-Shan, which are the main water sources of Central Asiatic republics."

### Japanese Experts To Study Effects of Kuwait Oil Fires in Iran

OW1507105591 Tokyo KYODO in English 1004 GMT  
15 Jul 91

[Text] Tokyo, July 15 KYODO—Six Japanese environmental experts will leave for Iran on Thursday to discuss ways of coping with the environmental fallout of the Persian Gulf war.

Iranian Foreign Minister Ali Akbar Velayati asked Japan to send experts to the country during talks last May in Tehran with Japanese Foreign Minister Taro Nakayama.

The team, consisting of four air pollution experts from the Meteorological Agency and two marine pollution experts from the Maritime Safety Agency, is scheduled to stay in Iran for one month.

Air pollution caused by oil wells set ablaze during the war is believed to pose a serious health risk to those living in the region.

Crude oil leaked into the Persian Gulf during the war has also polluted waters and coasts of gulf nations such as Iran and Saudi Arabia.

### United Arab Emirates Umm al-Qaywayn Coast Clear of Oil Pollution

JN0907164691 Manama WAKH in English 1538 GMT  
9 Jul 91

[Text] Dubayy July 9 (GNA)—Marine surveys on Umm al-Qaywayn coast have shown them to be clear of any oil pollution, a United Arab Emirates official said today.

Under Secretary of the Ministry of Agriculture and Fisheries for Financial and Administrative Affairs Hamad 'Abdullah al-Mutawwa' said: "There were no signs of oil pollution in the survey area which covered the eastern and western coasts of Umm al-Qaywayn inlet."

The survey was carried out recently by a group of researchers at the ministry's biology centre.

Al-Mutawwa' added that the area was clean and in normal marine condition.

He also stressed that the ministry has not received any report from the emirate's fishermen regarding any abnormal oil pollution.

## EGYPT

### Port Said Seeks Help Against Coastal Erosion

91P40341A Cairo AL-HAQIAH in Arabic  
8 Jun 91 p 12

[Report by Muhammad Hilmi]

[Text] The Governorate of Port Said has asked the Department of Environmental Affairs, the Coastal Protection Authority, and the Fish Resources Authority to intervene quickly to save the coast of Port Said from erosion and to stop the silting of the straits that has changed the sand formations along the coast.

The governorate warned against any hesitation, so that tourism and fish resources will not be exposed to destruction.

## ISRAEL

### Jordan River Power Station Project Protested

91AE0433B Tel Aviv MA'ARIV in Hebrew  
3 Jun 91 p 10

[Article by Rehav'am Ze'evi: "The Last River"]

[Text] Eretz-Israel is a small country, which contains a broad range of landscapes and natural resources, but in niggardly portions—little, very little. This is also the case as regards rivers and streams. We had only two rivers—the Jordan and the Yarkon. The Yarkon was taken to the Negev and the Jordan has shrunk. The coastal streams were long ago channeled into the irrigation pipes.

The fate of the Jordan River also was not good. In our great thirst in an arid and developing country, we sought to put it into a canal that would take its waters southward ("the National Carrier"). This project began in the 1950's near the Daughters of Jacob Bridge and Kfar Hanassi. But then came the Syrian disturbances, and the Jordan continued to flow to the Kinneret, and the water for the Carrier is pumped from there. The hand of the Almighty, perhaps, left us an enchanting part of the

mountainous Jordan, from the Daughters of Jacob Bridge to the Kinneret, which flows in an ancient natural landscape. The people of Kfar Hanassi are now seeking to take it from us in order to generate electricity cheaply.

If this project is completed, it will leave behind a wound in the ancient natural landscape and the loss of unique landscape values. This damage will be irreversible, and all the enthusiasts of Eretz-Israel and its lovers, we and our descendants, will be losers with no remedy from the creation of this fact.

The researchers of the Jordan through the generations, beginning with the traveler from Bordeaux in 333, through the Jewish traveler Benjamin of Tudela in the 12th century and to the scouts of the 19th century—the Irish Costigan, the British Molineaux, the American Lynch, and the Scottish McGregor ("Rob Roy"), found the Jordan to be relatively large, strongly flowing and raging, with rapids and strength. They had seen larger rivers in their own lands, but still were thrilled by the sight of the Jordan. It was precisely the Zionist realization that brought the diminishing of the Jordan and its shrinking, by exploiting its waters for irrigation.

There is a constant battle between the lovers of nature, the romantics, the people who support environmental quality and the enthusiasts for the landscapes of the homeland, and those involved in development and settlement activity as regards the preservation of natural values. Minister of Agriculture Hayyim Giv'ati, of blessed memory, once told me: "What luck that we finished building the country before they invented the nature preserves..."

Giv'ati was right and also not right in saying that. The correct path is somewhere in the middle. But it seems to me that those involved in development have already done and created a lot beyond the necessary balance, and have damaged too many landscape values. Their argument that "every dollar is dear" has not been proven, because the power station that is to be erected in Kfar Hanassi will generate less than one percent of the electricity consumed in the country.

The legal authorities were not on their guard and were not sufficiently vigilant when they allowed the construction of the station. Only the Society for the Protection of Nature foresaw the expected damages and was consistent in its opposition. But even if the permits have been granted, is it not our right to "think it out" again? There is also a legal opinion that argues that the construction of this station is an illegal act.

It is too bad that in this debate there were those who attacked the kibbutz movement and accused it of greed, and that there also were those who said that the standard of living of Kfar Hanassi should not be raised at the expense of all of us. These are superfluous, evil words, because the kibbutz movement has established pioneering enterprises for all of us, settled the borders, contributed an enormous contribution to the security of Israel, and provided a line of outstanding defenders of

nature such as 'Azarya Alon. Kibbutz Kfar Hanassi was established in the place of a military position on the Syrian front.

The subject is worthy of being placed again on the Government's agenda, so that we will not sin by inflicting hasty and terrible damage on landscape values, without ever being able to correct the distortion. We must remember that the Jordan is the river of Israel, and that it is also the last river.

## MOROCCO

### Water Projects Planned for Southern Provinces

91WN0539A Casablanca MAROC SOIR in French  
25 May 91 pp 1, 3

[Article from MAGHREB ARABE PRESSE: "Mr Kabbaj: 'The Southern Provinces Have Been Totally Reintegrated Into the National Economy': In 1991 a Major Dam Construction Program Will Be Initiated In the Region"]

[Text] Rabat—"The capital goods currently at their disposal have made it possible for the kingdom's southern provinces to totally integrate into the national economy," Mr. Mohamed Kabbaj, the minister of Public Works, Professional Training and Cadre Training stated.

Appearing on a special Moroccan Television (RTM) program on development projects in the southern provinces, which featured representatives of the ministries of the interior, agriculture and agrarian reform, public works, and professional training and cadre training as well as representatives of the National Office of Drinking Water, Mr. Kabbaj stated that these provinces at present have a road system linking them to the different regions of the kingdom, from five ports to Tan Tan, Sidi Ifni, Tarfaya, Laayoune, and Agadir, as well as four airports (Tan Tan, Guelmim, Laayoune, and Agadir).

For his part Mr. Driss Toulali, the director general of Local Authorities at the Ministry of the Interior, stated that in the last three years and the first quarter of the current year, the budgetary allocation for local authorities in the provinces of Guelmim and Tan Tan had reached about 30 billion centimes.

Speaking of the most important accomplishments with regard to water, Mr. Toulali emphasized that the communities of Zag, Assa, and Takjijit had been supplied with a drinking water network, a dam built on the Oum Al Achar oued, and that ten hillside lakes were being built.

On the matter of the infrastructures needed to treat water, Mr. Driss Toulali pointed out that several projects will be carried out this year in Guelmim with a view towards strengthening the main and secondary network,

plus the construction of a water treatment plant and the drawing up of a master sanitation plan for the town of Tan Tan.

With regard to the infrastructures needed for electrification and street lighting, Mr. Toulali announced that a number of projects will be initiated in Guelmim, Zag, and Tan Tan and went on to say that, as part of the national rural electrification program, ten rural centers in the provinces of Guelmim and Tan Tan will receive electric networks this year.

As he described the various public buildings put up in the course of the year, the director general for local governments mentioned the seat of Guelmim province that required the investment of three billion centimes, the seat of the town of Tan Tan, which was under construction, and the seat of Assa-Zag province, where work will soon begin.

For his part Mr. Mehdi Ben Zekri, the director general of hydraulics at the Ministry of Public Works, Professional and Cadre Training, said that water resources in the southern provinces came to some 350 million cubic meters, of which 162 cubic meters are in surface water.

After pointing out that the volume of ground water currently used came to 150 million cubic meters, Mr. Ben Zekri described a study project for the construction of seven big dams each with a 500 million cubic meter capacity, and of 16 other hydraulic projects aimed at ensuring control over surface water.

In describing the hillside dams under construction in the region, Mr. Driss Kassab, the director of water and sanitation at the Ministry of the Interior, announced that two projects had been completed whereas work on two others had begun. The total construction cost for these

projects, as well as of the five other hillside dams as part of the upcoming program, is estimated at 21 million dirhams.

He added that one dam will soon be finished in Guelmim province, where three other similar projects will be started in the very near future.

A major dam construction program should also start in 1992 in the region.

For his part Mr. Ahmed Hajji, director of planning at the National Office of Drinking Water, indicated that drinking water needs in the provinces of Tan Tan, Guelmim, and Assa-Zag have been estimated at close to 11,000 cubic meters per day whereas the available resources are 22,000 cubic meters per day and represent a volume sufficient to cover the region's needs up till the year 2000.

In this regard he announced that in its five-year plan the National Office of Drinking Water plans to invest in the region at the cost of 34 billion centimes (15 billion for Guelmim province, 17 billion for Tan-Tan province, and 2 billion for Assa-Zag province).

For his part Mr. Youness Ouled Chrif, the director of Rural Equipment at the Ministry of Agriculture and Agrarian Reform, stated that there were 30,000 hectares of lands irrigated by flood waters whereas approximately 2,500 hectares were irrigated by standing water.

Emphasizing efforts by the state to promote the agricultural sector in these provinces, he spoke in particular of research undertaken to this end by the government, the 30-percent share by the Agricultural Development Fund in agricultural investment, and the credits granted farmers by the National Agricultural Credit Savings and Loan Bank.



## USSR Law on Social Protection for Chernobyl Victims

### Text of Law

91WN0496A Moscow IZVESTIYA in Russian  
22 May 91 Union Edition pp 4-5

[Text of Law of the Union of Soviet Socialist Republics: "On Social Protection for Citizens Who Suffered as a Result of the Chernobyl Catastrophe"]

[Text] The accident at the Chernobyl AES [Nuclear Electric Power Station] on 26 April 1986 caused a great ecological catastrophe in terms of contamination of the biosphere and became a nationwide misfortune which affected the fates of millions of people living in vast territories.

New social and economic conditions arose in regions where zones of heightened radioactive contamination occurred because of the accident, and an extraordinary situation developed for citizens who had to be evacuated or moved from the territories contaminated with radionuclides or those who continued to live, work, or serve in the military on them, as well as for citizens who took part in cleaning up the consequences of the Chernobyl accident.

### Section 1. General Provisions

#### Article 1. Goals and Tasks of the Law

This Law is focused on protecting the rights and interests of citizens of the USSR who suffered as a result of the Chernobyl catastrophe, participated in cleaning up the accident at the Chernobyl AES and its consequences, found themselves in a zone adversely affected by factors which arose as a result of this accident, or were evacuated or moved to a new place of residence from the radioactively contaminated territories, and other categories of citizens defined by this Law.

The Law regulates the status of the territory subjected to radioactive contamination as a result of this catastrophe, the living conditions and medical care of the population, and the economic, scientific-research, and other activity on this territory.

#### Article 2. USSR Legislation on Social Protection of Citizens Who Suffered as a Result of the Chernobyl Catastrophe

Relations involving social protection of citizens who suffered as a result of the Chernobyl catastrophe are regulated by this Law and other enactments of legislation of the USSR issued in accordance with it, as well as by the legislative enactments of the republics.

#### Article 3. Citizens' Right to Compensation for Damages and To Receive Allowances and Benefits

USSR citizens have the right to compensation for damages to their health and property as a result of the

Chernobyl catastrophe, preferential medical care, and allowances and benefits for living and working on the territory contaminated by radioactive substances and in conditions where the adverse factors caused by this catastrophe operate.

Foreign citizens and stateless persons who took part in cleaning up the consequences of the accident at the Chernobyl AES have the right to compensation for damages done to their health and property while in the USSR, as well as to other allowances and benefits in accordance with USSR legislation.

Realization of the rights of citizens established by this Article is guaranteed by the state.

#### Article 4. Establishment of Allowances and Benefits

This Law establishes the basic types and amounts of monetary allowances and benefits granted to citizens who suffered as a result of the Chernobyl catastrophe.

The amount of monetary and other allowances and benefits not established in this Law is determined by the USSR Government unless otherwise specified.

The Union republics whose territories were subjected to radioactive contamination as a result of this accident may establish additional allowances and benefits out of the republic budget and other capital.

#### Article 5. Basic Points of the Concept of People Living in Regions Which Suffered as a Result of the Chernobyl Catastrophe

The part of this Law which defines the conditions of people living in territory subjected to radioactive contamination as a result of the accident at the Chernobyl AES is based on the points of the concept of people living in regions which suffered from the accident at the Chernobyl AES formulated by the USSR Academy of Sciences jointly with the republic academies of sciences:

1) the level of the irradiation dose of the population as a result of the accident at the Chernobyl AES is the basic indicator for adopting decisions on the need to implement safety measures as well as to provide compensation for damages;

2) an additional increase (over the level of natural and technogenic background radiation for the given area) in irradiation of the population from radioactive fallout resulting from the accident at the Chernobyl AES which in 1991 and subsequent years produces an average annual effective equivalent dose which does not exceed 1 millisievert (0.1 rem) is acceptable and does not require any intervention;

3) safety measures (or countermeasures) are implemented when there is an additional increase (over the level of natural and technogenic background radiation of the given area) in irradiation of the population from radioactive fallout as a result of the accident at the

Chernobyl AES in 1991 and subsequent years of more than 1 millisievert (0.1 rem) a year.

The set of safety measures should be focused on steadily reducing the dose (and this includes by reducing contamination of food products) while at the same time relaxing restrictions which disrupt the customary way of life. These goals should be optimally achieved under conditions where the average effective equivalent dose of irradiation of the population does not exceed the level of 5 millisieverts (0.5 rem) in 1991 and where, to the greatest possible extent justified by economic and social factors, this threshold level is reduced all the way down to 1 millisievert (0.1 rem) a year;

4) mandatory relocation from populated points indicated in the State Union Republic Program of Emergency Measures for 1990-1992 To Eliminate the Consequences of the Accident at the Chernobyl AES must be carried out;

5) a person who lives on the territory contaminated by radionuclides has the right to decide independently whether to continue living on this territory or move to a different place of residence based on objective information offered to him on the radiation conditions and the radiation doses, and the possible health consequences of them.

## **Section 2. Legal Regulation of the Territory Subjected to Radioactive Contamination as a Result of the Chernobyl Catastrophe**

### **Article 6. Radioactive Contamination Zones**

The force of this Law extends to the territories of the RSFSR, the Ukrainian SSR, and the Belorussian SSR whose environment was contaminated by radioactive substances as a result of the Chernobyl catastrophe and are divided into the following zones:

the alienation zone;

the relocation zone;

the habitation zone with implementation of safety measures focused on reducing exposure of the population and with citizens' right to receive allowances when they voluntarily relocate from this zone (henceforth this zone is called the habitation zone with the right to relocation);

the habitation zone with privileged socioeconomic status.

The boundaries of these zones are established and, depending on the radiation conditions and with consideration of other factors, reviewed at least once every three years by the governments of the RSFSR, the Ukrainian SSR, and the Belorussian SSR with the consent of the organs empowered by the USSR Government.

The legal regulation of territories subjected to radioactive contamination as a result of the Chernobyl catastrophe is established by this Law and the legislation of the RSFSR, the Ukrainian SSR, and the Belorussian SSR.

### **Article 7. The Alienation Zone**

The alienation zone (which in 1986-1987 was called the 30-kilometer zone, and from 1988 to the adoption of this Law—the relocation zone) comprises the territories of the RSFSR, the Ukrainian SSR, and the Belorussian SSR from which the population was evacuated in 1986 in accordance with the Norms of Radiation Safety.

People are prohibited from living permanently in the alienation zone and economic activity and use of natural resources are restricted. The types of economic activity and resource use and the conditions for them are established by the governments of the RSFSR, the Ukrainian SSR, and the Belorussian SSR jointly with the USSR Government.

Operation of the Chernobyl AES and economic activity associated with it plus work to take the energy units of this station out of operation are carried on by an organ empowered by the USSR Government at times agreed upon by the USSR Government and the Government of the Ukrainian SSR.

### **Article 8. The Relocation Zone**

The relocation zone is the territories of the RSFSR, the Ukrainian SSR, and the Belorussian SSR beyond the boundaries of the alienation zone where the level of soil contamination with cesium-137 is more than 15 Curie per square kilometer, or with strontium-90—more than 3 Curie per square kilometer, or with plutonium-239 or -240—more than 0.1 Curie per square kilometer. On territories of this zone where the level of soil contamination with cesium is more than 40 Curie per square kilometer, or with strontium-90—more than 3 Curie per square kilometer, or with plutonium-239 or -240—more than 0.1 Curie per square kilometer, as well as on territories of the zone with levels of soil contamination with cesium of 15-20 Curie per square kilometer, where the average annual effective equivalent dose of irradiation of the population from radioactive fallout as a result of the Chernobyl catastrophe may exceed 5 millisieverts (0.5 rem), mandatory relocation of the population is necessary. In the other territories of the zone citizens who have made the decision to go to a different place of residence or live on these territories have the right to receive the allowances and privileges established by this Law.

Taking into account the landscape and geochemical features of the territories subjected to radioactive contamination as a result of the Chernobyl catastrophe, and this includes the existence of territories with soils which facilitate high migration of radionuclides to plants, by legislation of the RSFSR, the Ukrainian SSR, and the Belorussian SSR individual territories with lower levels

of radioactive contamination where the average annual effective equivalent dose of irradiation of the population from radioactive fallout as a result of the Chernobyl catastrophe may exceed 5 millisieverts (0.5 rem) may be included in this zone.

Regular, mandatory medical monitoring of the population's health is provided and safety measures focused on reducing irradiation of the population are carried out, and the inhabitants are informed of this through the mass information media.

The rules for living in the relocation zone and the conditions for economic use of its territory are established by the governments of the RSFSR, the Ukrainian SSR, and the Belorussian SSR jointly with the USSR Government.

#### **Article 9. The Zone of Habitation With the Right to Relocation**

The zone of habitation with the right to relocation comprises territories of the RSFSR, the Ukrainian SSR, and the Belorussian SSR beyond the boundaries of the alienation and relocation zones with a level of soil contamination with cesium-137 of from 5 to 15 Curie per square kilometer. Citizens who live in populated points where the average annual effective equivalent dose of irradiation of the population exceeds 1 millisievert (0.1 rem) and have decided to leave this zone for a different place of residence have the right to receive compensation for property lost in connection with the move and to other allowances and benefits established by this Law.

Taking into account the landscape and geochemical features of the territories subjected to radioactive contamination as a result of the Chernobyl catastrophe, and that includes the existence of territories with soils which facilitate high migration of radionuclides to plants, by legislation of the RSFSR, the Ukrainian SSR, and the Belorussian SSR individual territories with lower levels of radioactive contamination where the average annual effective equivalent dose of irradiation of the population from radioactive fallout as a result of the Chernobyl catastrophe exceeds 1 millisievert (0.1 rem) may be included in this zone.

Additional criteria to determine the boundaries of this zone depending on the contamination of its territory by other (besides cesium-137) long-lived radionuclides may be established by the governments of the RSFSR, the Ukrainian SSR, and the Belorussian SSR jointly with the USSR Government.

Regular, mandatory medical monitoring of the health of the population is provided in the zone and safety measures focused on reducing irradiation of the population are carried out, and the inhabitants are informed of this through the mass information media.

The rules for the population to live in this zone and the conditions for inhabitants' voluntary relocation from it,

implementation of economic and other activity on this territory, and implementation of measures to preserve the health and reduce the risk of illness are established by the governments of the RSFSR, the Ukrainian SSR, and the Belorussian SSR jointly with the USSR Government.

#### **Article 10. The Zone of Habitation With Privileged Socioeconomic Status**

The zone of habitation with privileged socioeconomic status comprises the territories of the RSFSR, the Ukrainian SSR, and the Belorussian SSR beyond the boundaries of the zones of alienation and relocation and the zone of habitation with the right to relocation where the level of radioactive contamination of the soils with cesium-137 is from 1 to 5 Curie per square kilometer. The average annual effective equivalent dose of irradiation of the population should not exceed 1 millisievert (0.1 rem) in this zone.

Additional criteria to determine the boundaries of this zone depending on the contamination of its territory with other (besides cesium-137) long-lived radionuclides may be established by the governments of the RSFSR, the Ukrainian SSR, and the Belorussian SSR jointly with the USSR Government.

Periodic radiation monitoring and medical monitoring of the population's health are carried out in this zone.

#### **Article 11. Ecological Normalization of Territories Subjected to Radioactive Contamination**

A program of economic, legal, and other measures focused on normalizing the natural environment is carried out on territories subjected to radioactive contamination as a result of the Chernobyl catastrophe. They include: scientific research; monitoring of the condition of the natural environment and objects which are potentially dangerous in the ecological sense; state ecological expert review of economic and other activity; reduction of and compensation for damages inflicted upon nature, including termination of the action of ecologically dangerous factors; and implementation of measures to return radioactively contaminated territories to economic circulation.

Organization and implementation of monitoring of the ecological situation in these territories and planning and implementation of measures to normalize them ecologically are carried out by the governments of the RSFSR, the Ukrainian SSR and the Belorussian SSR in agreement with the USSR Government.

#### **Section 3. The Status of Citizens Who Suffered as a Result of the Chernobyl Catastrophe**

##### **Article 12. Categories of Citizens**

The force of this Law extends to the following citizens who suffered as a result of the Chernobyl catastrophe:

1) persons who became ill and had radiation sickness caused by the consequences of the accident at the Chernobyl AES as well as disabled persons for whom a causal relationship is established between the onset of the disability and the Chernobyl catastrophe, from among the following persons:

a) persons (including those sent temporarily or for work purposes) who took part in cleaning up the consequences of the accident within the boundaries of the alienation zone or were involved in operations or other jobs at the Chernobyl AES;

b) management or rank and file personnel of the internal affairs organs who served (or are serving) in the alienation zone;

c) military personnel\* and reservists summoned to special assemblies and enlisted to perform jobs in the alienation zone involving cleaning up the consequences of this accident;

\* Here and in what follows this refers to officers, warrant officers, extended-term servicemen, service-women, and regular-term sergeants and enlisted personnel on active duty in the USSR Armed Forces, the troops and organs of the USSR State Committee for State Security [KGB], internal and railway troops, and other military formations.

m +) persons evacuated (or those who left voluntarily) in 1986 from the alienation zone as well as those who live (or used to live) from 26 April 1986 in the relocation zone and in the zone of habitation with the right to relocation;

2) persons (including those sent temporarily or for work purposes) who in 1986-1987 took part in work to clean up the consequences of the accident at the Chernobyl AES within the boundaries of the alienation zone or during this period were involved in operations or other jobs at the Chernobyl AES, as well as military personnel and reservists summoned to special assemblies and enlisted during this period to work on cleaning up the consequences of this accident, regardless of their site of deployment or the work performed, as well as management or rank and file personnel of internal affairs organs who served in the alienation zone in 1986-1987;

3) persons (including those sent temporarily or for work purposes) who in 1988-1989 took part in work to clean up the consequences of the accident at the Chernobyl AES within the boundaries of the alienation zone or during this period were involved in operations or other jobs at the Chernobyl AES, as well as military personnel and reservists summoned to special assemblies and enlisted during this period to work on cleaning up the consequences of this accident, regardless of the site of deployment and the jobs performed, as well as management or rank and file personnel of the internal affairs organs who served in the alienation zone in 1988-1989;

4) persons involved in operating the Chernobyl AES or in jobs in the alienation zone;

5) persons evacuated (or persons who left voluntarily) in 1986 from the alienation zone or were (or are being) resettled, as well as those who voluntarily left the relocation zone in 1986 and in subsequent years, including children who were in the womb on the day of evacuation;

6) persons who live (or work) in populated points on the territory of the zone of habitation with the right to relocation;

7) persons who live (or work) in populated points on the territory of the zone of habitation with privileged socioeconomic status;

8) persons who live (or work) in the relocation zone;

9) persons who voluntarily left for a new place of residence from the zone of habitation with the right to relocation after the accident at the Chernobyl AES;

10) military personnel and management and rank and file personnel of the internal affairs organs who are (or were) on military (or regular) duty in the relocation zone, the zone of habitation with the right to relocation, or the zone of habitation with privileged socioeconomic status.

#### **Article 13. Allowances and Benefits for Persons Who Became Ill and Had Radiation Sickness and for Disabled Persons**

Persons indicated in Point 1 of Article 12 of this Law have the following rights:

1) to free medicine (with a doctor's prescription), free annual sanatorium-resort treatment or monetary compensation in an amount equal to the average value of the voucher, and free travel on transport (with the exception of taxis) from the place of residence to the place of treatment or dispensary, out-patient, or clinical examination center and back;

2) free manufacture and repair of dentures (with the exception of dentures from precious metals);

3) payment of temporary disability benefits in an amount equal to 100 percent of the wage regardless of the continuous length of service;

4) payment to working disabled persons of temporary disability benefits for up to four consecutive months or up to five months in the calendar year;

5) provision of living space within a year from the day the request is made on condition of recognition of their need for improved housing conditions or for additional living space in the form of a separate room;

6) payment for the living space occupied (within the limits of norms envisioned by current legislation),



including space occupied jointly with members of families living there, amounting to 50 percent of the apartment payment figured using the schedules established for workers and white-collar workers.

These persons, as well as the families of persons who perished as a result of the accident at the Chernobyl AES, those who died as a result of radiation sickness, and disabled persons who have died are offered a discount in the amount of 50 percent off the designated payment for use of the heat, water, gas, and electrical systems, while those who live in homes without central heating receive a 50-percent discount on the cost of fuel obtained within the limits of norms established for sale to the population;

7) transfer of the state housing fund living space which they occupy free of charge to personal ownership;

8) payment of the difference between their former wage and the wage for the new job when they change to a lower-paying job for medical reasons. This difference is paid by enterprises, institutions, or organizations until work capacity is restored or disability is established;

9) a disability pension for disabilities which came as a result of injury or illness caused by the accident at the Chernobyl AES, and to members of their families—a pension for loss of the breadwinner for these same reasons in the manner envisioned by the USSR Law: "On Pension Support for Citizens in the USSR" in an amount equal to the actual compensation of damages determined in accordance with the Regulations authorized by the USSR Government. If the citizens so desire, the pension is computed from the wage received for work in the alienation zone;

10) granting of a disability pension to military personnel or management and rank and file personnel of internal affairs organs and a pension for loss of the breadwinner to their families in the manner and by the norms established by legislation in case of a wound, contusion, or injury received while performing military (or regular) service. In this case, if they so desire, officers, warrant officers, extended-term servicemen, service-women, and management and rank and file personnel of internal affairs organs may have the disability pension resulting from these causes computed on the basis of their higher pay for work in the alienation zone; while regular-term military personnel on active duty may, if they so desire, have the pension computed from five times the minimum wage;

11) a free passenger car with manual transmission if there are the appropriate medical indications;

12) compensation by social security organs of expenditures related to care in the home, if there are no close relatives living with them;

13) provision of foodstuffs in accordance with rational norms of food consumption;

14) free travel on all types of city passenger transport (with the exception of taxis) and on public use motor

transport (with the exception of taxis) in rural areas within the boundaries of the administrative rayon for the place of residence, as well as on suburban railway and water transport and on suburban route buses, and free travel by train or on ships of transit and local lines of the river fleet once a year (round-trip), and in rayons without railroad traffic—by air, water, or intercity motor transport with the right to obtain tickets on a priority basis;

15) availability of an annual vacation at a time that is convenient for them, as well as an annual supplemental vacation of 14 calendar days with pay.

16) exemption from paying income tax or the tax for bachelors, single people, and citizens with two or fewer children on all the income they receive. The spouse of the victim is also exempt from paying the tax for bachelors, single persons, or citizens with two or fewer children;

17) installation of a telephone on a priority basis;

18) preferential job security when the number of employees or staff is reduced and preferential job placement when the activity of the enterprise, institution, or organization is terminated;

19) priority access to housing and construction cooperatives, cooperatives to build and operate collective garages and parking places for means of transportation and their technical service, horticultural societies (or cooperatives), acquisition of garden sheds and materials to build them, and industrial goods in great demand, including passenger cars, motorcycles, and motor boats and priority service at enterprises offering domestic services, technical service and repair of means of transportation, and public catering, at housing and municipal services institutions, and at communications and intercity transport organizations;

20) receipt of no-interest loans for individual or cooperative housing construction with 50 percent paid out of Union budget capital;

21) receipt of no-interest loans to obtain or build garden sheds and to fix up garden plots. Compensation to banks of losses incurred from offering this loan is made using Union budget capital;

22) priority service in treatment and prevention institutions and pharmacies;

23) when they go on pension or change their place of work, use of the polyclinics to which they were assigned before they went on pension or before they changed their place of work;

24) preferential (when other conditions are equal) enrollment in higher and secondary special and vocational-technical educational institutions as well as in courses for occupational training with dormitory space for the time of study offered in the established manner.

Acceptance into preparatory departments of the appropriate higher educational institution occurs regardless of the existence of places, with a mandatory offer of dormitory space.

The stipend for these persons is set 50 percent higher than the usual amount;

25) provision of children with places in children's preschool institutions, specialized children's treatment and sanatorium institutions, pioneer camps, and other health institutions, regardless of departmental affiliation, without waiting;

26) priority receipt of plots of land for individual housing construction;

27) payment of the unpaid part, up to 5,000 rubles [R] per family, of a no-interest loan for setting up a household obtained by evacuees from the alienation zone using the capital of the Union budget;

28) preferential provision of places in nursing homes for the elderly and disabled;

29) receipt of a no-interest loan of up to R50,000 to organize a subsidiary operation or farm. Compensation to banks of losses incurred from granting this loan is made using capital of the Union budget.

The allowances and benefits envisioned by Points 5-7, 17, 19-21, and 25-28 of this Article extend to the families of those who perished as a result of the accident at the Chernobyl AES, of those who died as a result of radiation sickness, and of deceased disabled persons to whom the benefits indicated in this Article extended.

#### **Article 14. Allowances and Benefits to Participants in Cleaning Up the Consequences of the Accident at the Chernobyl AES in the Alienation Zone**

Persons indicated in Point 2 of Article 12 of this Law have the right to the allowances and benefits envisioned by Points 2, 3, 6-8, 13, 15-19, and 21-28 of Article 13 of this Law as well as to the following:

1) old-age pension in preferential conditions envisioned for workers engaged in jobs with especially dangerous or especially difficult conditions of labor by Point "a" of Article 14 of the USSR Law: "On Pension Support of Citizens in the USSR":

men—upon reaching the age of 50 and with a length of service of at least 20 years, regardless of the length of service in the alienation zone;

women—upon reaching the age of 45 and with a length of service of at least 15 years, regardless of the length of service in the alienation zone;

2) payment of the old-age pension in full without consideration of wages (income) being received;

3) a supplement to the pension in the amount of 30 percent of the minimum old-age pension;

4) compensation for damages incurred as a result of illness or injury which occurred in connection with performing work to clean up the consequences of the accident at the Chernobyl AES and which led to permanent loss of work capacity (without disability being established), determined in the manner envisioned by legislation for cases where such damages incurred by workers and white-collar workers while performing their work duties are compensated;

5) free medicine (with a doctor's prescription);

6) priority annual provision through the work place of a voucher for a sanatorium-resort (given the medical indications) or other health institution free of charge, or if it is impossible to offer a voucher—monetary compensation equal to its average value;

7) priority provision of living space where a need to improve housing conditions is recognized;

8) free travel on all types of urban passenger transport (with the exception of taxis) and on public use motor transport (with the exception of taxis) in rural areas within the boundaries of the administrative rayon for the place of residence, as well as on suburban railway and water transport and on suburban route buses;

9) the right to a 50-percent discount on the cost of travel (round-trip) once a year by air, railway, and water transport;

10) receipt of a no-interest loan for individual or cooperative housing construction with 25 percent paid off using Union budget capital;

The allowances and benefits envisioned by points 6, 7, and 17 of Article 13 and Point 7 of this Article extend to the families of deceased participants in cleaning up the consequences of the accident at the Chernobyl AES.

Persons indicated in Point 3 of Article 12 of this Law have the right to the allowances and benefits envisioned by points 3, 8, 18, 21-26, and 28 of Article 13 and points 2, 4, and 8 of Part 1 of this Article as well as to the following:

1) an old-age pension under preferential conditions, with the exception of persons who took part in cleaning up the consequences of the accident at the Chernobyl AES in 1989, as envisioned for workers engaged in work under dangerous and difficult working conditions by Point "b" of Article 14 of the USSR Law: "On Pension Support of Citizens in the USSR":

men—upon reaching the age of 55 and with a length of service of at least 25 years, regardless of the length of service in the alienation zone;

women—upon reaching the age of 50 and with a length of service of at least 20 years, regardless of the length of service in the alienation zone;

2) a supplement to the pension equal to 25 percent of the minimum old-age pension;

3) the availability of an annual vacation at a time which is convenient for them;

4) priority annual provision through the work place of vouchers for sanatorium-resort treatment and rest;

5) preferential enrollment in garage-construction cooperatives and horticultural societies (or cooperatives);

6) receipt of a no-interest loan for individual or cooperative housing construction;

7) acceptance on the apartment rolls for citizens living in communal apartments, regardless of the size of the living space occupied;

8) provision of foodstuffs in accordance with rational norms of food consumption, as well as preferential provision of durable industrial goods.

Identification papers and chest insignia are issued by the USSR ministries and departments, the republic councils of ministers, the ispolkoms of the kray and oblast soviets of people's deputies, military commissariats, and social support organs. Officials are responsible for the correct registration and issuance of identification papers in accordance with legislation in force.

#### **Article 15. Allowances and Benefits for Persons Engaged in Operating the Chernobyl AES and Jobs in the Alienation Zone**

Persons (including those sent temporarily or for work purposes) indicated in Point 4 of Article 12 of this Law have the right to the following:

1) higher labor payment, a reduced work week, and additional vacation time established by the USSR Government;

2) preferential pension support under List No 1 of Production Facilities, Jobs, Occupations, Posts, and Indicators, which is being ratified by the USSR Government;

3) inclusion of time worked in the alienation zone, multiplied by 1.5, in the labor service record and in the service record which gives the right to a preferential pension under List No 1 of Facilities, Jobs, Occupations, Posts, and Indicators.

Pensions for workers and white-collar workers who got occupational diseases related to the effects of radiation while working in the alienation zone envisioned by this Article are assigned under List No 1 of Production Facilities, Jobs, Occupations, Posts, and Indicators regardless of the length of service in dangerous working conditions;

4) a disability pension for a disability which occurred as a result of an injury or illness caused by the accident

at the Chernobyl AES, as well as for members of their families—a pension for loss of breadwinner as a result of these reasons in the manner envisioned by the USSR Law: "On Pension Support of Citizens in the USSR" in an amount equal to actual compensation for damages determined in accordance with the Regulations being ratified by the USSR Government. If the citizens so desire, the pension may be computed from the wage received for work in the alienation zone;

5) assignment of a disability pension for military personnel and management and rank and file personnel of internal affairs organs and of a pension for loss of breadwinner to their families in the manner and according to the norms established by legislation in case of a wound, contusion, or injury received when performing military (or regular) service. If they so desire, officers, warrant officers, extended-term servicemen, servicewomen, and management and rank and file personnel of internal affairs organs may have the disability pension computed from their higher pay for work in the alienation zone, and regular-term military personnel on active duty—from twice the amount of the minimum wage, if they so desire;

6) payment of the full old-age pension to working pensioners regardless of the wages they are receiving;

7) continued wages for a year after termination of work for medical reasons related to radiation effects and consequent removal from the alienation zone and transfer to a lower-paying job or training for a different occupation.

Additional work and social-everyday benefits to workers in the alienation zone are established by the USSR Government and the governments of the Ukrainian SSR and the Belorussian SSR.

#### **Article 16. Allowances and Benefits for Persons Evacuated From the Alienation Zone or Resettled (or Being Resettled) From the Relocation Zone**

Persons indicated in Point 5 of Article 12 of this Law have the right to the allowances and benefits envisioned by Points 21, 22, and 28 of Article 13 of this Law, as well as to the following:

1) cancellation of the labor contract when resettled without observing the term envisioned by current legislation for giving notice to the administration of the enterprise, organization, or institution;

2) priority job placement by ispolkoms of local soviets of people's deputies in the new place of residence in accordance with their occupations and qualifications. When such job placement is impossible, the ispolkoms provide them with other work taking into account their wishes or offer them the opportunity for training in a new occupation (or specialization) with wages continued during the training period in the established manner;



3) continuation of average wages and uninterrupted work credit during the job placement period, but for no more than 4 months;

4) monetary compensation for property lost because of resettlement or if these persons so desire, receipt of different property of equal value;

5) receipt of a one-time subsidy in connection with moving to a new place of residence;

6) compensation for expenditures related to moving;

7) provision of housing spaces, as a rule in settlements, houses, or apartments specially constructed for this purpose, or provision of living space in buildings of the state and public housing fund without waiting, or purchase of apartments in buildings of the state or public housing fund without waiting, or enrollment in housing or housing-construction cooperatives at the new place of residence without waiting, when current legislation recognizes that they need improved housing conditions (regardless of the time they lived in this populated point and of the living space occupied);

8) priority offering of housing space for citizens who are among those who are unable to work and have been resettled to the living space of close relatives (parents, children, grandchildren, brothers, or sisters) to live together as a member of the family, if as a result of moving the need arises to improve housing conditions in accordance with current law;

9) receipt of plots of land for construction of individual houses and acquisition of construction materials without waiting;

10) receipt of a no-interest loan to set up a household or to obtain construction materials to build individual houses with 50 percent paid from Union budget capital;

11) priority right to enrollment in cooperatives for construction and operation of collective garages and parking spaces for means of transportation;

12) preferential provision to children of places in children's preschool institutions, specialized children's treatment and sanatorium institutions, pioneer camps, and other health institutions, regardless of departmental affiliation;

13) compensation for the cost of dachas, garden sheds, and other structures, fruit and berry plots, and property inherited or received on other legal bases located in these zones in accordance with Point 4 of this Article, regardless of the place of permanent residence;

14) preferential provision of durable goods;

15) exemption from the agricultural tax for 3 years when resettled to a rural area.

A one-time subsidy in connection with moving non-working pensioners is paid in the manner established for workers moved to a new place of residence.

The conditions and procedure for moving, offering housing, and finding jobs for citizens being resettled are established by the governments of the RSFSR, the Ukrainian SSR, and the Belorussian SSR (on the condition that they move within the corresponding republic).

Preferential pension support of persons indicated in this Article is established by legislation of the RSFSR, the Ukrainian SSR, and the Belorussian SSR.

When citizens of the RSFSR, the Ukrainian SSR, or the Belorussian SSR move to a permanent place of residence in other republics, they retain the right to the allowances and benefits established by this Article and by legislation of these republics in the manner determined by inter-republic agreements. The governments of these republics compensate for expenditures to move citizens to other republics using capital allocated to overcome the consequences of the Chernobyl catastrophe.

#### **Article 17. Allowances and Benefits for Persons Who Live (or Work) in Populated Points on the Territory of the Zone of Habitation With the Right to Relocation**

Persons indicated in Point 6 of Article 12 of this Law have the right to the allowances and privileges envisioned by Point 24 of Article 13, Point 5 of Part 1 and points 6 and 8 of Part 2 of Article 14, and Point 13 of Article 16 of this Law, as well as to the following:

1) monetary compensation in the amount of 40R a month;

2) annual vacation of 37 calendar days with pay, not counting additional vacation for working in dangerous working conditions, if other enactments do not envision a longer vacation, and payment of a one-time material subsidy for health purposes in an amount equal to the state monthly wage rate (or official salary);

3) a 100-percent increase in the allowance for children of poor families;

4) a subsidy for caring for a child until they reach the age of three. This amount is established at double the amount envisioned by current legislation;

5) labor payment at higher rates but no more than 50 percent above the state wage rates (or official salaries);

6) payment in higher amounts, but no more than 50 percent, of pensions and benefits to nonworking pensioners and disabled persons;

7) payment of full old-age pensions to working pensioners regardless of the wages (or income) they are receiving;

8) maternity leave to women lasting 90 calendar days;

9) care of children in children's preschool institutions free of charge; provision of foodstuffs in accordance with norms established for these institutions or payment of the cost of food in children's preschool institutions if the



child does not go to such an institution, in the amount established by local soviets of people's deputies;

10) feeding of schoolchildren and pupils in vocational-technical schools and *tekhnikums* free of charge;

11) exemption from paying the agricultural tax;

12) with voluntary relocation, receipt of monetary compensation for property lost because of the resettlement, a no-interest loan to set up a household, and payment of expenditures related to moving to the new place of residence.

Allowances and the costs of moving are paid by the *ispolkoms* of the local soviets of people's deputies at the former place of residence.

Workers sent temporarily or for work purposes to this zone are granted the privileges envisioned by points 1, 2, 5, and 7 of this Article for the actual time worked in this zone.

Differentiation of the monetary allowances and labor payment at higher state wage rates (or official salary rates) relative to the degree of radioactive contamination of the territory or by other criteria is established by legislation of the RSFSR, the Ukrainian SSR, and the Belorussian SSR.

Preferential pension support of inhabitants of this zone is established by legislation of the RSFSR, the Ukrainian SSR, and the Belorussian SSR.

#### **Article 18. Allowances and Benefits for Persons Who Live (Or Work) on the Territories of the Zone of Habitation With Privileged Socioeconomic Status**

Persons indicated in Point 7 of Article 12 of this Law have the right to the privileges envisioned by Point 24 of Article 13 and Points 8 and 10 of Article 17 of this Law, as well as to the following:

1) monetary compensation in the amount of R30 a month;

2) labor payment at higher rates but no more than 15 percent above the state wage rates (or official salary rates);

3) annual paid vacation of 30 calendar days, without counting additional vacation time for working in dangerous working conditions, if other enactments do not envision a longer vacation;

4) regular, comprehensive medical care.

The list of populated points to whose inhabitants the force of this Article extends is determined by the governments of the RSFSR, the Ukrainian SSR, and the Belorussian SSR by agreement with the USSR Government.

#### **Article 19. Allowances and Benefits for Persons Who Live (Or Work) in the Relocation Zone**

Persons indicated in Point 8 of Article 12 of this Law have the right to the allowances and privileges envisioned by Point 24 of Article 13, Point 5 of Part 1 and points 6 and 8 of Part 2 of Article 14, and points 3, 4, and 7-12 of Article 17 of this Law, as well as to the following:

1) monetary compensation in the amount of 60R a month;

2) annual paid vacation of 44 calendar days, without counting additional vacation time for working in dangerous working conditions, if other enactments do not envision a longer vacation, and a one-time material subsidy for health purposes in an amount equal to the state monthly wage rate (or official salary rate);

3) labor payment at higher rates but no more than 100 percent above the state wage rates (or official salary rates);

4) payment of higher, but no more than 100 percent higher, pensions and benefits to nonworking pensioners and disabled persons.

Differentiation of monetary allowances and labor payment at higher state wage rates (or official salary rates) relative to the degree of radioactive contamination of the territory or by other criteria is established by legislation of the RSFSR, the Ukrainian SSR, and the Belorussian SSR.

Workers who are sent temporarily or for work purposes to this zone are granted the privileges envisioned by points 1-3 of this Article and by Point 7 of Article 17 of this Law.

Preferential pension support of inhabitants of this zone is established by legislation of the RSFSR, the Ukrainian SSR, and the Belorussian SSR.

#### **Article 20. Allowances and Benefits for Persons Who Voluntarily Left the Zone of Habitation With the Right to Relocation for a New Place of Residence**

Persons indicated in Point 9 of Article 12 of this Law have the right to the allowances and benefits envisioned by Point 21 of Article 13 and points 1-6, 8, and 10-13 of Article 16 of this Law, as well as to the following:

1) priority provision of living space or priority purchase of apartments in buildings of the state and public housing fund, or priority enrollment in housing or housing-construction cooperatives at the new place of residence;

2) priority receipt of plots of land for construction of individual houses and acquisition of construction materials.

Allowances and moving costs are paid by the *ispolkoms* of the local soviets of people's deputies at the former place of residence.

The conditions and procedure for offering housing and job placement for citizens being resettled are established by legislation of the RSFSR, the Ukrainian SSR, and the Belorussian SSR (on the condition that they move within the corresponding republic).

When citizens of the RSFSR, the Ukrainian SSR, or the Belorussian SSR move to a permanent place of residence in other republics, they retain the right to the allowances and benefits established by this Article and the legislation of these republics in the manner determined by interrepublic agreements. The governments of these republics reimburse expenditures when citizens move to other republics using capital allocated to overcome the consequences of the Chernobyl catastrophe.

**Article 21. Privileges for Military Personnel and Management and Rank and File Personnel of the Internal Affairs Organs Who Are Serving (or Served) Military (or Regular) Duty in the Zones of Relocation, Habitation With the Right to Relocation, or Habitation With Privileged Socioeconomic Status**

Persons indicated in Point 10 of Article 12 of this Law have the right to the appropriate allowances and benefits envisioned by articles 15-20 of this Law in the manner determined by the USSR Government.

**Article 22. The Conditions for Serving Military (or Regular) Duty in Territories Subjected to Radioactive Contamination as a Result of the Chernobyl Catastrophe**

Serving military (or regular) duty in the alienation zone is forbidden. If the need arises to perform service duties in this zone, military personnel are sent on a voluntary basis, other than in cases envisioned by Article 11 of the USSR Law: "On the Legal Conditions of the State of Emergency."

The conditions for serving military (or regular) duty in the relocation zone are determined by the USSR Government.

Military (or regular) duty in the zone of habitation with the right to relocation or the zone of habitation with privileged socioeconomic status is carried out in accordance with current legislation. Citizens drafted for military service from the zone of relocation or the zone of habitation with the right to relocation are sent for regular-term active duty in military units and institutions in posts which preclude any exposure to radiation during service.

Sergeants and enlisted personnel on regular-term active duty in the zone of habitation with the right to relocation have the right after 12 months to a vacation lasting 14 calendar days, without counting time needed to reach the vacation site and return from it. The specific lengths of time of vacations contingent upon the level of contamination of the territories or other criteria are established by the USSR Government.

Military servicemen (with the exception of regular-term sergeants and enlisted personnel) who are serving in the zone of habitation with the right to relocation have the right to change the place of military service in the manner established by the USSR Government and to reserve living space in the former place of service.

Decisions on additional benefits and allowances for citizens living and working on territories subjected to radioactive contamination as a result of the Chernobyl catastrophe made by the higher organs of power and management of the RSFSR, the Ukrainian SSR, and the Belorussian SSR extend to persons performing military (or regular) duty and management and rank and file personnel of internal affairs organs who are serving on these territories, as well as to members of their families.

**Article 23. Organization of Medical Aid and Radiation Protection for Persons Who Suffered as a Result of the Chernobyl Catastrophe**

Persons indicated in Article 12 of this Law, as well as their children who were born in the post-accident period under conditions where radioactive emissions could indirectly affect them, are subject to specialized medical observation (dispensary service). A State Register is being set up for their personal records.

Medical aid to persons who suffered as a result of the Chernobyl catastrophe and dispensary observation of them are carried out by the health care institutions at their place of residence or work. Specialized medical care for these persons is provided by health care institutions. The list of these institutions and the procedure for giving medical aid and dispensary observation are determined by the organs empowered by the USSR Government and the governments of the RSFSR, the Ukrainian SSR, and the Belorussian SSR and other republics.

Interdepartmental expert review councils and military-medical commissions authorized by the organs and empowered by the USSR Government and the governments of the Union republics establish the causal connection between the illness or disability and the accident at the Chernobyl AES for persons indicated in Point 1 of Article 12 of this Law. The causal connection between partial or complete loss of work capacity of victims of the Chernobyl catastrophe who are citizens is considered established if these councils or commissions do not affirm the absence of such a connection.

Persons who are dissatisfied with the decisions of these expert councils or military-medical commissions have the right to request a second review of the case in the Central Interdepartmental Expert Council To Establish a Causal Connection Between the Disease or Disability and the Performance of Work To Clean up the Consequences of the Accident at the Chernobyl AES formed by organs empowered by the USSR Government.

When a medical commission for determination of disability (VTEK) establishes that the disability is a result of illness for persons indicated in Point 2 of Article 12 of

this Law, as well as for persons evacuated from the alienation zone, the disability is considered related to the accident at the Chernobyl AES without examination of these persons by interdepartmental expert councils or military-medical commissions.

The necessary level of ecological protection of the population is provided in regions subjected to radioactive contamination as a result of the Chernobyl catastrophe. For this purpose, special service offices of the organs empowered by the USSR Government and the governments of the RSFSR, the Ukrainian SSR, and the Belorussian SSR provide state supervision which includes monitoring the condition of the environment, including radiation conditions on the entire contaminated territory, and the amount of harmful substances (including radionuclides) in drinking water, foodstuffs, and locally produced agricultural output, as well as levels of internal and external irradiation of the population.

#### **Article 24. Social Protection, Medical Care, and Improvement of the Health of Children and Adolescents**

In order to provide social protection and medical care and improve the health of children and adolescents under 18 years of age who live in the relocation zone or the zone of habitation with the right to relocation, as well as those evacuated and moved from the alienation or relocation zones or the zone of habitation with the right to relocation, including those who were in the womb on the day of evacuation, the following additional benefits are granted:

for these children and adolescents:

1) sanatorium-resort treatment, with the appropriate medical indications, in sanatoriums of the appropriate specialization, including in "Mother and Child" sanatoriums, free of charge;

2) acquisition of medicines (with a doctor's prescription) free of charge;

3) free travel (round-trip) together with one of the parents or substitute person on the railroad or on ships of transit and local lines of the river fleet, and in rayons without railway traffic—by air, water, or intercity motor transport, to the place of treatment or sanatorium-resort treatment, at the direction of medical institutions, with a priority right to tickets;

4) annual free health treatment in (public or sanatorium-type) pioneer camps and other health improvement institutions, and if that is not possible, receipt of monetary compensation in an amount equal to its average value;

5) if illness affects the blood-producing organs (acute leukemia) or the thyroid gland (adenoma or cancer), or malignant tumors appear, children and adolescents have the right to the benefits envisioned by Article 13 of this Law;

for parents of children under 14 years of age:

1) 100-percent payment based on a temporary disability certificate (to one of the parents) in order to take care of the sick child, regardless of the length of service;

2) one of the parents may stay with the sick child in the medical institution (at doctors' recommendations) for the entire period of treatment with the issuance of the certificate and payment for temporary disability.

If it is impossible for the parents to be with the child during treatment, the force of points 1 and 2 of Part 2 of this Article extends to the other person who is taking care of the child.

The procedure for medical care and health improvement of children and adolescents indicated in this Article is determined by the organs empowered by the USSR Government and the governments of the RSFSR, the Ukrainian SSR, and the Belorussian SSR with the participation of public associations.

The benefits envisioned by points 1, 2, and 5 of Part 1 of this Article as well as the right to preferential health improvement in general-type pioneer camps and with the appropriate medical indications in health improvement institutions extend to children and adolescents living in the zone of habitation with privileged socioeconomic status.

#### **Article 25. On Additional Benefits Not Envisioned by This Law**

The governments of the republics, ispolkoms of soviets of people's deputies, enterprises, institutions, and organizations, and trade union associations may within the limits of their authority take additional measures to provide foodstuffs and improve material-domestic conditions or medical, trade, and transport service for persons to whom the force of this Law extends.

#### **Article 26. On Resumption of Vital Activity of the Population in the Alienation and Relocation Zones**

Resumption of permanent habitation of the population in populated points and rayons of the alienation zone and the relocation zone, including returning of evacuees, is possible only on a voluntary basis after the radioactive impact in these points and rayons has been reduced to levels which require no restrictions and after the necessary conditions have been created for habitation and labor activity of the population.

The decision to resume permanent habitation of the population in these zones, including returning evacuees, is made by the governments of the RSFSR, the Ukrainian SSR, and the Belorussian SSR.

**Section 4. Allowances for Persons for Damages to Health Caused by the Chernobyl Catastrophe**

**Article 27. Allowances for Damages to Health for Disabled Persons and Families Who Lost Their Breadwinner**

Disabled persons indicated in Point 1 of Article 12 of this Law are paid a one-time allowance for damages to health in the following amounts: Group 1—R10,000; Group 2—R7,000; Group 3—R5,000. Every year they are also paid a one-time material subsidy for health improvement in the following amounts: Group 1 and Group 2 disabled persons—three times the amount of the minimum wage; for Group 3 disabled persons—two times the amount of the minimum wage.

Families who lost their breadwinner as a result of the Chernobyl catastrophe are paid a one-time allowance in the amount of R10,000, while the parents of a deceased person receive R5,000.

**Article 28. Allowances for Damages to Health for Participants in Cleaning up the Consequences of the Accident at the Chernobyl AES**

Persons indicated in Point 2 of Article 12 of this Law are paid an annual one-time material subsidy for health improvement in an amount three times the minimum wage.

Persons indicated in Point 3 of Article 12 of this Law who took part in eliminating the consequences of the accident at the Chernobyl AES in 1988 are paid an annual material subsidy for health improvement in an amount twice the minimum wage.

Persons indicated in Point 3 of Article 12 of this Law who took part in cleaning up the consequences of the accident at the Chernobyl AES in 1989 are paid an annual one-time material subsidy for health improvement in the amount of the minimum wage.

**Article 29. Allowances for Families for Loss of a Breadwinner Who Participated in Cleaning Up the Consequences of the Accident at the Chernobyl AES**

Disabled dependent family members have the right to a monthly allowance for the loss of a breadwinner who participated in eliminating the consequences of the accident at the Chernobyl AES as a result of the Chernobyl catastrophe. In this case the monthly allowance is assigned for children, regardless of whether they are the breadwinner's dependents.

An allowance is granted for each disabled family member in an amount equal to 50 percent of the minimum old-age pension regardless of the pension which has been established for these persons by this Law.

Children who have lost their breadwinner are paid a one-time material subsidy in an amount equal to the minimum wage.

**Article 30. Payment of Allowances for Damages to Health to Persons Who Suffered as a Result of the Chernobyl Catastrophe and to Families for Loss of the Breadwinner**

The allowances for damages to health to persons who suffered as a result of the Chernobyl catastrophe and to families for loss of the breadwinner because of this catastrophe are paid regardless of other types of income.

**Section 5. Conditions for Activity by Enterprises, Institutions, Organizations, and Public Associations**

**Article 31. The Conditions for Activity of Enterprises, Institutions, and Organizations Located in Territories Subjected to Radioactive Contamination**

The conditions for work of enterprises, institutions, and organizations in the jurisdiction of republics located on territories subjected to radioactive contamination to which the force of this Law extends are determined by the governments of the RSFSR, the Ukrainian SSR, and the Belorussian SSR, and for enterprises, institutions, and organizations of Union subordination—with the agreement of the USSR Government.

Enterprises, institutions, and organizations located in these territories have the following rights:

1) exemption from taxation of the part of profits directed for health improvement of workers and members of their families;

2) conclusion of a labor agreement with specialists on a contract basis.

Taxable income of enterprises, organizations, and institutions received from activities involving cultural-domestic, trade, and other types of service to the population and construction in the relocation zone and the zone of habitation with right to relocation is reduced by 30 percent. The lists of enterprises, organizations, and institutions are established by the governments of the republics.

**Article 32. Public Associations**

Public associations whose charter activity is rendering aid to persons who suffered from the Chernobyl catastrophe are exempt from taxation for amounts directed for these purposes. The tax on profits for enterprises and organizations of these public associations is reduced by the amount which is directed to these associations to carry out their charter activity of rendering aid to victims of the Chernobyl catastrophe. Public associations and their departments and enterprises are granted privileges in the manner determined by the USSR Government when paying customs duties on goods they export or import.



**Article 33. Requirements for Foodstuffs and Consumer Goods Produced on a Territory Subjected to Radioactive Contamination as a Result of the Chernobyl Catastrophe**

Production for the direct use of the population of foodstuffs and consumer goods contaminated with radioactive substances as a result of the Chernobyl catastrophe above the levels set by the organs empowered by the USSR Government is forbidden. If such products and goods go on sale, they are to be confiscated by the local organs of power.

Persons guilty of violating the requirements of this Article bear responsibility in accordance with legislation of the USSR and the republics.

**Article 34. The Right of Citizens and Public Associations to Information**

Citizens and public associations have the right to receive timely, complete, and reliable information on questions involving the Chernobyl catastrophe. Information is provided by institutions and organizations empowered for this by the USSR Government and the governments of the republics.

Officials of enterprises, institutions, and organizations, public associations, and the mass information media bear responsibility for deliberate distortion or suppression of objective data on questions involving the Chernobyl catastrophe in accordance with legislation of the USSR and the republics.

President of the Union of Soviet Socialist Republics, M. Gorbachev.

Moscow, the Kremlin, 12 May 1991.

**Implementation Resolution**

91WN0496B Moscow IZVESTIYA in Russian  
22 May 91 Union Edition p 5

[Resolution of the USSR Supreme Soviet: "On Putting Into Force the USSR Law 'On Social Protection of Citizens Who Suffered as a Result of the Chernobyl Catastrophe'"]

[Text] The USSR Supreme Soviet resolves:

1. To put into force the USSR Law: "On Social Protection of Citizens Who Suffered as a Result of the Chernobyl Catastrophe" from the moment it is adopted, and in the part involving pension support—from 1 September 1991.

2. To specify for the USSR Government and the governments of the RSFSR, the Ukrainian SSR, and the Belorussian SSR, before 1 July 1991, the lists of populated points which are part of the territories of radioactive contamination defined by this Law.

3. Within three months the USSR Cabinet of Ministers shall:

adopt the necessary normative enactments to apply the USSR Law "On Social Protection of Citizens Who Suffered as a Result of the Chernobyl Catastrophe";

present to the USSR Supreme Soviet proposals to introduce into current legislation changes and additions stemming from this Law;

bring the enactments of the USSR Government regarding the Chernobyl catastrophe into line with this Law.

4. Until legislation of the USSR and the republics is brought into line with the USSR Law: "On Social Protection of Citizens Who Suffered as a Result of the Chernobyl Catastrophe," that legislation is to be applied to the extent it does not contradict this Law.

5. It is recommended to the supreme soviets of the republics that they adopt the necessary enactments to apply the Law adopted on questions involving their jurisdiction.

6. It is recommended to the supreme soviets of the republics and the local soviets of people's deputies that they take measures to ensure additional guarantees of social protection and improvement of living conditions for citizens who suffered as a result of the Chernobyl catastrophe, and especially to increase attention given to less well-off categories of such citizens.

7. The USSR Cabinet of Ministers shall, depending on changes in conditions in rayons subjected to the impact of radiation as a result of the Chernobyl catastrophe, introduce to the USSR Supreme Soviet proposals to change or amend this Law.

8. Financing of expenditures related to adopting the USSR Law: "On Social Protection of Citizens Who Suffered as a Result of the Chernobyl Catastrophe" is to be carried out in 1991 in accordance with the USSR Supreme Soviet Resolution of 25 April 1990 "On a Uniform Program To Eliminate the Consequences of the Accident at the Chernobyl AES and the Situation Related to This Accident" and with the State Union Republic Program of Emergency Measures for 1990-1992 To Eliminate the Consequences of the Accident at the Chernobyl AES, and starting in 1992—from the Union budget.

9. Beginning in 1992 extend the allowances and benefits envisioned by the USSR Law: "On Social Protection of Citizens Who Suffered as a Result of the Chernobyl Catastrophe" for persons who became ill with radiation sickness or became disabled as a result of radiation accidents and their consequences to other (in addition to the Chernobyl AES) civilian and military nuclear facilities.

The USSR Cabinet of Ministers together with the USSR Supreme Soviet Committee for Public Health should introduce proposals by 1 November 1991 for measures on social protection of USSR citizens who suffered as a result of radiation accidents and their consequences in

other (in addition to the Chernobyl AES) civilian and military nuclear facilities, as well as those who suffered as a result of experiments, exercises, and other jobs involving all types of nuclear installations, including nuclear weapons.

Chairman of the USSR Supreme Soviet, A. Lukyanov.  
Moscow, the Kremlin, 12 May 1991.

### **Penyagin Calls for Ban on Nuclear Power Plant Construction**

LD0207152291 Berlin ADN in German 1131 GMT  
2 Jul 91

[Text] Berlin/Moscow (ADN)—Before the reactor catastrophe at Chernobyl in April 1986, there had already been three big nuclear accidents. In an interview with BERLINER KURIER newspaper (Tuesday evening edition), Soviet nuclear expert and chairman of the parliamentary commission for nuclear energy Aleksandr Penyagin said: "The only way to avoid a nuclear holocaust is to stop construction." According to Penyagin, tens of thousands of tons of nuclear waste were dumped into the river Techa in the southern Urals after 1945. In this way at least 140,000 people were heavily contaminated. Eight years later a storage container burst at the Mayak nuclear fuel factory.

Penyagin demanded that nuclear research be separated from the defense industry. The construction of nuclear power plants in the Soviet Union should be banned for five years. "Nuclear energy must only be generated again here when standards have been improved."

### **Dushanbe Orders Dismantling of Argus-Type Nuclear Reactor**

LD1507133391 Moscow TASS in English 1111 GMT  
15 Jul 91

[By TADZHIKT-TASS correspondent Galina Gridnyova]

[Text] Dushanbe July 15 (TASS)—A session of the Dushanbe city soviet adopted a decision to dismantle a nuclear plant of "Argus" type in one of Dushanbe's research institutes.

A special investigation, conducted by deputies at the request of the city's residents determined that the design and construction of the institute's nuclear plant was carried out without co-ordination with seismologists. At the same time, the building in which the nuclear plant was assembled is located in a seismologically dangerous zone on a territory of extremely unfavourable geological conditions.

Besides that, it turned out that the storehouse for the reactor's fuel had been repeatedly flooded with underground waters. In the course of the construction of the reactor hall, underground communications have rusted and require repair. The deputies believe that the reason

for this are the major violations of the IAEA [International Atomic Energy Agency] rules, regulating the design and the construction of units that are potentially dangerous to man and the environment.

### **Kazakh Anti-Nuclear Movement Creates New Fund**

LD0807131591 Moscow TASS in English 1226 GMT  
8 Jul 91

[By TASS correspondent Vladimir Ganzha]

[Text] Alma-Ata July 8 TASS—The Nevada-Semipalatinsk Movement working for a full ban on nuclear weapons tests recently set up the Public Health Fund.

"We succeeded in suspending the work of the Semipalatinsk nuclear test site with people's diplomacy and there was not a single underground explosion there last year and this year," poet Olzhas Suleymenov, who leads the movement said.

"We now aim to rehabilitate the health of people in areas affected by tests of weapons of mass destruction," he said.

Scientists from Alma-Ata and Leningrad designed installations to produce clean drinking water in contaminated areas, he said.

The installations will be provided to people in villages around the Semipalatinsk site free of charge, he said.

The new fund aims to raise money to build hospitals, rehabilitation centres, medical factories and sanatoria in environmental-disaster zones in Kazakhstan.

"We work in close cooperation with international public and parliamentary organizations and parliaments in Kazakhstan and other Soviet republics. We hope this will enable us to reach our goals to ensure healthy normal living conditions for all," Suleymenov concluded.

### **Kazakh President Cited on Plans for Semipalatinsk Nuclear Site**

PM0907111591 Moscow KOMSOMOLSKAYA  
PRAVDA in Russian 6 Jul 91 p 1

[SIBINFORM report: "Blasting Work in Kazakhstan To End"]

[Text] The question of the fate of the Semipalatinsk nuclear test site, where for 40 years they have carried out major nuclear weapons tests whose effects have affected not only the inhabitants of Kazakhstan but also those of adjacent areas of Siberia, has been finally decided.

As IAN has reported, President Nursultan Nazarbayev of Kazakhstan has stated that there will be another two nuclear explosions at the test site near Semipalatinsk before the end of this year, but they will be the last nuclear weapons tests in Kazakhstan.

Previously the Defense Council under the USSR president had adopted a decision on ending nuclear tests at the Semipalatinsk test site from January 1993. However, the Kazakh Republic Supreme Soviet advocated the immediate ending of tests.

Meanwhile, according to Nazarbayev, the military are insisting on carrying out two explosions of a nuclear device, offering to pay financial compensation to the Kazakhstan Government for this. "We consider this insulting to the Kazakh people," the president noted.

According to physicians' data, in the last few years the number of patients with leukopenia and other dangerous illnesses in the test site's area, which exceeds 18,000 square kms, has doubled. Nevertheless, a poll carried out among the population living in immediate proximity to the test site showed that inhabitants are allowing another two explosions to be carried out. From 1 January 1992, after the nuclear weapons have been shut down, the test site will be used as a scientific research center.

#### **Republics Become Co-Founders of Ecological Monthly 'PRIRODA I CHELOVEK'**

91WN0537B Bishkek KOMSOMOLETS KIRGIZII  
in Russian 24 Apr 91 p 3

[Report by D. Koduranova, AALAM press center editor: "PRIRODA I CHELOVEK"]

[Text] The title is the name of a monthly journal whose parent organization was, until recently, the USSR State Committee for Protection of the Environment. I say until recently, because the state committees for protection of the environment in nine of the Union republics, including ours, have become the co-founders of this journal on an equal footing with the Union committee. The first conference of the co-founders took place recently in Moscow, which, unfortunately, was not attended by representatives of all the republics, but which, nevertheless, did discuss and adopt the basic constituent documents for the journal PRIRODA I CHELOVEK. The USSR Minister for the Use of National Resources N. Vorontsov took part in the work of the conference.

Those present signed an agreement on the founding of the journal which sets forth the schedules for the payment of startup funds and the procedure for membership and withdrawal of co-founders and also designates the rights of the council of co-founders, which will convene at least once each year and is competent to decide on the programs and directions of activity by the journal's editor and to appoint the chief editor.

One very important question in the work of the conference was the choice of chief editor for the journal. Viktor Yaroshenko was elected on a competitive basis. He is an engineer by profession and has spent many years in journalism and dealing with ecological issues, and has published several books on this subject. Before this appointment he was head of the information department

on the journal NOVYY MIR. He won sympathy for his principled approach with respect to the independence of the journal and his uncompromising attitude toward those who pollute the natural environment, no matter who they may be. His energy and his desire to create a new, interesting journal, and his clear-cut program of action helped the co-founders to vote for him unanimously. And along with the new chief editor, those attending the conference discussed the charter for the journal PRIRODA I CHELOVEK, which secures for its associates quite broad rights and offers the opportunity freely to realize their capabilities.

With respect to the correspondents in the republics and of Goskompriroda who have become co-founders, V. Yaroshenko decided to abandon the practice of setting up a network of stringers, placing his hopes instead mainly in the public organizations in these republics engaged in ecological problems.

Of course, the journal will not limit itself to information only from the republics that are co-founders. But they will be given priority rights in publication, and space has also been allotted on the pages of the journal for republic ecological information. This right will be specified in a special agreement between the journal editor and the co-founders, and this will be discussed and adopted by the council of co-founders. Representatives of the co-founders, the USSR and Russian Soviet Federated Socialist Republic state committees for protection of the environment, which were delegated this right by the council at the conference, and the chief editor of the journal PRIRODA I CHELOVEK are now working on this.

I think that readers in our republic will soon be getting a good chance to look at Kyrgyzstan's problems both from the inside and the outside. And, ecology experts will be able to obtain interesting and complete information and share, through this publication, their own work and discoveries, and, simply, their proposals.

#### **Austrian Firm's Deal for Disposal of Toxic Waste in USSR Criticized**

91WN0537A Moscow KOMSOMOLSKAYA PRAVDA  
in Russian 18 Jun 91 p 1

[Yu. Kulibaba report: "All the Waste Is Welcome Here"]

[Text] The Krivoy Rog Cement and Mining Combine has signed a fantastic contract with an Austrian company. Under the terms of the contract the foreign company is to deliver 10,000 tons of gypsum sludge. And for each ton it will pay the Krivoy Rog Cement and Mining Combine 1,330 Austrian schillings. Transportation costs will also be borne by the supplier, and it would appear at no profit gain, only scientific interest.

The subject of the research is ordinary waste, which is obviously called "sludge" for the sake of conspiracy, and it is to be used to conduct experiments to develop new technology for the manufacture of cement. In any event,



that is the official version. But this is nothing but legend. It is obvious that the proposed cooperation will yield no scientific results. The waste being exported into the country cannot be used in any kind of production because it contains substances that are dangerous to the environment and to people's health, and they are there in concentrations tens and hundreds of times greater than the maximum permissible levels. According to the Administration of the Committee for State Security, it is proposed to bury the imported waste in a quarry and use the money received for the needs of the enterprise.

Managers at the Kamysh-Burunskiy Iron Ore Combine decided to rush through a similar deal. A protocol of intent has already been signed. It is proposed to bury a million tons of toxic waste on the territory of the Crimea; the foreign company is prepared to pay 30 West German marks for each ton.

The list of similar deals could be continued. The privilege of destroying nature on a particularly large scale is evidently being transferred from the Union departments to the enterprises whose managers are ready to make any kind of deal with their consciences for the sake of immediate profit.

#### **Poll Finds State of Environment 'Intolerable'**

LD0107172191 Moscow Radio Rossii Network  
in Russian 1300 GMT 1 Jul 91

[Text] Russia's State Statistical Office has published data from a poll of the republic's inhabitants on the state of the environment: 74 percent of those polled consider that the state of ecology in the populated areas where they live is intolerable and one in five would like to change his place of residence due to this. The largest proportion of people dissatisfied with the state of the environment is to be found in Kaliningrad, Bryansk, Komsomolsk-na-Amure, Lipetsk, Berezniki, Novokuznetsk, Cherepovets, and Krasnoyarsk. People suffer most from the poor quality of foodstuffs—84 percent; from air pollution—81 percent; and 73-74 percent of those polled are dissatisfied with the state of their drinking water.

#### **Excessive Radiation Noted in Kirovograd Oblast Villages**

PM1107095591 Moscow Russian Television Network  
in Russian 1700 GMT 6 Jul 91

[From the "Vesti" newscast: Report by Yu. Repeynikov, A. Budulatyev from Kirovograd Oblast, identified by caption]

[Text] [Announcer] Renaming of places has become commonplace. As we all know now, it is possible to rename places for a time and then give them back their old names...

In Kirovograd many streets could acquire new names, albeit for a time—"Ulitsa radioaktivnaya" [radioactive street].

[video shows sign reading: "Halt! Danger zone. Explosion from 12-13. Post No.11"]

[Repeynikov] Radioactive streets are the scourge of Kirovograd Oblast. And especially of remote villages, where roads are a problem. Near Novoarkhangel'skiy Rayon there are unguarded dumps belonging to the uranium-mining Smolenskoye Ore Directorate. As a result, the background gamma radiation in Sinyukha and Zhuravka villages is several tens of times above permitted levels. No matter to whom their inhabitants have complained, it has been in vain. The prosecutor's office did initiate a criminal investigation, but it found that there was no case to answer, although hundreds of people had suffered. After that the economic managers grew even more brazen. The oblast soviet executive committee had to set up a commission for emergency situations which, unfortunately, devoted itself to paperwork. Now something quite different is needed. It is necessary to ensure that the dumps are guarded, and that background radiation in the streets of adjacent villages is investigated.

#### **Volgograd Faces Water Supply Crisis; Volga River Pollution Cited**

LD1407182891 Moscow Central Television Vostok  
Program and Orbita Networks in Russian 1630 GMT  
14 Jul 91

[From the "Vremya" newscast]

[Excerpt] An emergency situation in connection with the supply of drinking water has developed in Volgograd, a city with 1 million inhabitants. Unusually hot and dry weather makes the situation worse.

There is no water in this city, which is spread along the largest river in Europe. What a joke! But even in the Volga itself there is hardly a place anywhere along the river where one can bathe. Pathogenic cholera organisms have been found in the river. At present, doctors advised people to take extra care in keeping everything clean and hygienic. But some people cannot even wash their hands before eating because of the absence of water. But, worse still, there is not enough water for one single sip.

Desperate people gather at spontaneous meetings and storm executive committees premises. According to the local press, cheerful and quick-thinking traders appeared in the city to offer a barrel of water for R30, or for two bottles of vodka.

Operational headquarters continue daily meetings in the building of the city soviet. It seems they are trying to normalize the water supply situation. The latest accident at the Severnyy water supply station has affected residents of five Volgograd regions simultaneously, though the situation in the other three is no better. Many water



pipes were installed under the ground almost 50 years ago. There are still water pipes dating back to the pre-war time.

A total of R20 million is necessary for a complete reconstruction of the entire enterprise. [passage omitted]

### **Northern Siberia Hydroelectric Station To Be Built Despite Protests**

*LD1007110591 Moscow Radio Moscow World Service in English 0800 GMT 10 Jul 91*

[Text] Despite public pressure, the Soviet power industry ministry has not given up on the idea of building a super-powerful hydroelectric station at Turukhansk in northern Siberia, although the minister of the industry, Yuriy Semenov, has declared that the start of the project has been put off till the year 2000. The design work continues, reportedly.

The power giant of 20,000 megawatts is to be built in a mountain canyon. Its water reservoir will spread for hundreds of kms. Scientists believe that this would amount not only to an ecological disaster but also to an ethnic one [as heard].

### **Crimean Solar Energy Institute Boasts Progress**

*OW1607013091 Moscow Central Television First Program and Orbita Networks in Russian 1900 GMT 10 Jul 91*

[G. Bulanov video report; from the "Utro 120 + 30" program]

[Text] The Krzhizhanovskiy Power Engineering Institute Experimental Base is situated on the southern coast of the Crimea. The group of specialists working there, are occupied in developing various methods of converting solar energy. So, how interesting is that? Judge our correspondent's report for yourselves. [Video shows a pyramid shaped building with solar panel sides, a parabolic solar energy collector, buildings, then cuts to an interior to show a console and an operator at a wall control panel]

[Begin recording] [Bulanov] How unusual, even fabulous, this Base looks. The sun first went to work here four years ago, which incidentally, the Central Television morning program related at the time. The results achieved over this period raise hopes that we are, at last, on the threshold of the effective use of everlasting, ecologically clean, and safe sources of energy. For example, the efficiency factor of solar energy converters is approaching the levels of thermal electric power stations. There is a sufficiently wide range of equipment available for practical application. Even for a dacha there is this type of shower which gives 120 liters of hot water per hour. [Video shows a solar panel equipped outdoor shower cubicle, then cuts to show Bulanov interviewing V.K. Rybalko, Chief of the Base]

[Rybalko] We basically use solar energy for heating and cooling needs. As well as heat pumps, both (?complex) and absorption heat pumps. And also...

[Bulanov interrupting] How are we to understand that?

[Rybalko] These are machines for producing cold in summer, for conditioning air in premises, and in winter producing warmth for heating. Here, with the participation of the leading Institute's specialists, equipment for the direct conversion of solar energy into electricity is being used. And similarly, solar energy is used to obtain oxygen and hydrogen.

[Bulanov] Well, here you are working on the southern coast of the Crimea. Does the fact that this is a resort, and not only just the southern sun, influence your work schedule?

[Rybalko] Yes, for example, with the participation of other organizations, we have developed an interesting heliotherapeutic installation, with the aid of which we can treat people using solar energy. [Video shows a patient in a booth with a louvered solar reflector aimed at the knees] We have treated such diseases as osteochondrosis, radiculitis, rhinitis, in 3,000 patients in each category, and seem to have achieved positive results. We made several installations turnkey projects, with our own efforts and it involved development, planning, introduction, and adjustment. We collaborate with many organizations, including international organizations. [Video shows machinery room, a large parabolic solar energy collector] More so now that solar energy has begun to compete with thermal energy, after the increase in the cost of fuel. Therefore, we are now competitive. [end recording]

### **Sochi To Become Special Ecological, Economic Rayon of Russia**

*LD0907095191 Moscow All-Union Radio Mayak Network in Russian 2230 GMT 8 Jul 91*

[Text] It has been decided to set up a special ecological and economic rayon of Russia in the resort town of Sochi in the near future. The decision on this adopted by the Russian Soviet Federated Socialist Republic Council of Ministers was published by CHERNOMORSKAYA ZDRAVNITSA [BLACK SEA RESORT] According to the document, the town will change its legal status and become not just a center for treatment and the recreation of Russian citizens, but also a center for Soviet and international tourism.

### **Baltic Republics Set Up Joint Environmental Commission**

*LD0907225691 Tallinn Radio Tallinn Network in Estonian 0600 GMT 9 Jul 91*

[Text] A joint commission of the three Baltic republics was set up to resolve Lithuanian, Latvian, and Estonian environmental issues. It is led by Lithuania's deputy environment minister, and working groups have been set

up according to subject matter. There have been repeated discussions on work aims. Today, there will be another meeting in Vilnius in which practical steps on environmental protection will be discussed. Deputy Minister Eva Kraav heads the delegates from the republic of Estonia's environment ministry.

### **Estonia's Sillamäe Area Health Problems Linked to Pollution**

91UN2023A

[Editorial Report] Tallinn RAHVA HAAL in Estonian on 11 April 1991 carries on page 4 an 1,100-word article by Kaja Kurg entitled, "In the Wake of the Sillamäe Incident," that examines the causes of an epidemic of hair loss among children in the Sillamäe area which came to light two years ago. These are summed up by physician Raiot Silla as follows:

"We cannot say anything with absolute certainty yet. The chemical studies have not been adequate. Personally, however, I think that the epidemic was caused by the fire at the Estonia mine. The harmful substances traveled to Sillamäe along with the water spreading through a tectonic crack. Increased radiation was apparently not the reason for the hair falling out this time."

Reviewing the data obtained from both Estonian and Soviet researchers, Silla adds:

"The most harmful of environmental factors affecting the health of residents in the area is the chemical energy industry based on oil shale. We have known for some time that sediments of oil shale ashes and gases contain lead and cadmium. Now we have also found antimony, selenium, boron, barium and bismuth."

References were also made to radium and thorium as byproducts of the manufacturing process, even though local radiation was dismissed as a major cause for hair loss. The winds from Chernobyl, however, were mentioned as a contributing factor to the epidemic.

Studies also showed lower health and nutritional levels in residents of the Sillamäe area, as compared to control groups from other parts of the country. Remedial measures suggested include curbing environmental pollution and providing purification for the water supply. An international conference on Sillamäe is slated to be held in Tallinn and in Leningrad, sometime in May.

### **Lithuania Debates Site for Possible New Oil Port**

LD0207160991 Vilnius Radio Vilnius in English  
2130 GMT 1 Jul 91

[Text] Last week the heading on the front page of one of Lithuania's dailies was a rhetorical question which appeared in bold type: **Does Lithuania Need Oil?** Anybody in Lithuania would probably give an automatic "yes" in answer. At present, all Lithuania's oil suppliers are based in the Soviet Union. Were it not for last year's economic blockade imposed by the Kremlin which

turned off the supplies of oil, gas, and other raw materials, we would have never realized how vulnerable we are in this area.

Ever since then, Lithuania has taken resolute steps in searching for alternative sources of fuel. Local supplies of oil were discovered in western Lithuania, yet several years would be needed before industrial exploitation could begin. Meanwhile, power industry specialists have urged the government to take appropriate action in providing a flow of oil to Lithuania via tanker if possible. This would necessitate major reconstruction of a port on the Baltic Sea.

However badly Lithuania needs oil, the general public was initially shocked by such a plan, mainly because they are well aware of the environmental situation in Lithuania, and therefore can easily predict what the construction of an oil tanker port on the Baltic Sea means in reality. The more so, since the consequences of a huge oil spill not far from Klaipeda two years ago have not yet been eradicated.

Thus the public at large is boiling with disputes on whether or not Lithuania needs such a port and, if it does, where the port should be located. Last month the Lithuanian government convened for a special meeting, and it was expected that it would reach a final decision on the actual site of the port. Yet, so far, the question remains open. Taking part in the governmental meeting were the ministers of power industry, communications, construction, and urban development, as well as officials from the environmental protection department and the local municipality of Klaipeda, who presented well-grounded facts, which either supported or rejected this idea. The Danish firm of Knudsen Thoresen also put forth a project.

While everybody agreed that Lithuania simply has no alternative but to build a port suitable for oil tankers, the question that remains unanswered is the very location of this port. Two sites, Melnrage and Karkles, have been chosen, and Karkles is obviously preferred to Melnrage, but here is what experts say:

Any construction north of Klaipeda in the direction of Karkles would seriously threaten the beaches. Furthermore, they would obviously imperil the colonies of crustaceans and molluscs, as well as the spawning grounds of industrial fish. [sentence as heard] Molluscs act as natural bile filters, cleaning up the polluted water in the Kursiai lagoon and in Port Klaipeda, unquote.

Asked by the LIETUVOS RYTAS daily which site he preferred for the construction, the Lithuanian minister for power industry, Leonas Asmantas, said: "I've been to both places. Nobody would choose Melnrage. The port has to be built in accordance with all international requirements. I think that the threat would be greater if the port were to be built on the narrow peninsula in Melnrage rather than in the vicinity of the Karkles village."

The Danish firm Knudsen Thoresen also considers Karkles to be the best choice, while the manager of the oil export firm in Klaipeda points out that the economic conditions in Karkles are more suitable than in Meln-rage.

Minister for the Power Industry Leonas Asmantas boldly states, "while nobody doubts that Lithuania does in fact need such a port, this port is the answer to the question of whether or not Lithuania will survive."

The port would allow Lithuania to receive supplies of oil by sea and make it less dependent on the Soviet Union.

The economic aspects of this project are more than obvious, but people continue to be worried about how

ecologically friendly this project is, and whether the existence of Lithuania's gem holiday resort area Palanga would not be at stake.

Well aware of the public attitudes and the defiant moods of the Greens, the government has commissioned the Sociological Research Center to conduct an opinion poll in the Klaipeda district. Both projects will be put forward to parliament and the public for further discussion, so that each fact in favor of one or another project could be carefully weighed. At the moment it is still too early to draw any far-reaching conclusions, although some people have already urged the Greens to take action and save Lithuania's nature before it is too late.

## GERMANY

### Uranium Mining Regions To Be Redeveloped

AU0307084391 Berlin BERLINER ZEITUNG in German 2 Jul 91 p 4

[Peter-Hans Horn report: "Redeveloping the Uranium Region Will Cost 10 Billion German Marks"]

[Text] According to Federal Environment Minister Klaus Toepfer (Christian Democratic Union), the redevelopment of the uranium mining regions in Saxony, Thuringia, and Saxony-Anhalt will cost more than 10 billion German marks and will take at least eight to ten years. The Wismut AG will submit a revised redevelopment concept by the end of August. That was stated by the minister at the Federal News Conference in Berlin yesterday [1 July].

According to Toepfer, about one-tenth of the 12,000-square km Wismut region is directly contaminated. The Soviet Union does not have to take part in the redevelopment because it transferred its 50-percent share in the company to the Federal Republic in May this year.

Toepfer told journalists that increased radon radiation has been found above all in the vicinity of dumps and settling facilities. However, based on existing information, the people living in the mining region are not directly endangered, the minister said. He added that it is not clear whether small quantities of radioactivity lead to an increased risk of cancer. Therefore, to end the uncertainty about the situation, epidemiological studies are being carried out among the people with international support.

So far, 7,000 cases of lung cancer are known; compensation has been paid in about 5,300 cases. That concerns above all miners who were exposed to high radon radiation in the mines before 1955 without having been adequately protected. Possibly a combination of stone dust and heavy metal dust led to the "Schneeberger lung disease"—lung cancer. As long as the Wismut company was in operation, about 500,000 people worked there. There is detailed health data on these people, which has been locked away in archives in recent months and is protected from unauthorized access.

## ITALY

### Banned Pesticides Discovered in Produce at Rome Markets

91WN0566A Rome L'ESPRESSO in Italian 7 Jul 91 p 41-42

[Article by Enrico Fontana: "Poison Salad"]

[Text] The first to be surprised were the same technicians who had analyzed the fruit and vegetable products collected in Rome in two GS supermarkets (the distribution chain controlled by the SME, the agro-food group

owned by IRI [Institute for the Reconstruction of Industry]). Aldrin, a highly toxic insecticide prohibited as far back as 1973, appeared on the leaves of a sample of lettuce in very high doses: 6.7 milligrams per kilogram of vegetables, 94 times more than the maximum limit for cereals.

There should not be even the slightest trace of this insecticide in lettuce. "We had the laboratory tests repeated twice," said Ermete Realacci, president of the national Environmental League, "and then after every reasonable doubt was removed we sent the results to the Ministry of Health, which informed us that an official investigation would be instituted immediately."

In brief, the poisoned lettuce caught the environmentalists themselves unawares. In fact, the results of an analysis of samples taken from the GS shelves were to be found in a file prepared for the SME assembly, held in Naples on 27 June, in which "ecological shareholders" of the Environmental League also participated. Realacci explained, "We expected to find traces of insecticides, but certainly not Aldrin, which for the last 18 years should no longer be produced or, much less, sold."

It was precisely the extreme danger of this product, used for treating seeds and for the disinfection of land, that triggered its prohibition. Aldrin, which is carcinogenic, or teratological (that is, responsible for genetic mutations), also has the characteristic of dissolving the DDT which has accumulated in the fatty deposits in our body during the years when use of this insecticide was permitted. Once "freed", such DDT tends to concentrate rapidly in the blood and to circulate throughout the whole body, with dangerous effects on health.

But the overdose of insecticide also dismayed the top leadership of the SME. Giuseppe Trillo, in charge of the company's public relations, declared, "When we learned the results of these analyses we immediately had other samples of lettuce taken from the same two supermarkets. The results encouraged us: There was no trace of Aldrin. In any event, we resolved to cancel the contracts with the suppliers if other episodes such as this should occur." So, was this merely one unpleasant incident along the way?

According to the League's file, that would not appear to be the case. Ninety-one percent of the samples taken in Rome contain traces of pesticides, and 27 percent of these are illegal. In fact, on the same lettuce contaminated by Aldrin, the presence of propizamide, a weed-killer suspected of causing cancer, was noted in twice the legal amounts permitted. In another sample, again of lettuce, Folpet was found, a prohibited substance that the EPA (the American agency for environmental protection) has classified as a suspected carcinogenic.

It is even worse with carrots. In those analyzed by the Environmental League, concentrations of Deltametrina five times the legal limit, and two prohibited so-called active principles, iprodione and Tetraclorvinphos were discovered. Finally, the greater part of the samples



analyzed contained three or four traces of different pesticides, with all the risks deriving from the "synergistic" effect of these materials, not yet regulated by law, moreover.

Realacci affirmed, "Obviously the SME has no interest in marketing fruit and vegetable products in such a condition, but it is unthinkable that a public organization, urged by the government to increase the quality and security of consumer products, should not make strict tests on what it puts on sale in its supermarkets."

In any event, it appears to be a difficult task to determine exactly who is responsible. Giuseppe Trillo explained, "In those two Roman supermarkets we are putting our trust in two firms that, by signing the contract specifications, undertake to ensure the quality of the product according to rigorous standards. As for tests, we have our own research center which makes them by sample, obviously. Until now, no problems of this type have arisen. We feel absolutely confident of their accuracy."

Furthermore, at the IRI companies they claim it is not up to the SME to test whether the farmers do or do not

respect the law when they use pesticides or other substances. In fact, tests ought to be made by the local health units. But very few of them devote full time to the difficult work of testing products such as lettuce, which is consumed within 24 hours.

One local health unit in particular, No. 29 of Bologna, has for years watched over the largest Italian fruit and vegetable market. The results are all too eloquent: In 1990 48 percent of the products analyzed were contaminated by traces of pesticide, and 14 percent of these were clearly illegal.

"Unfortunately, the one in Bologna is an exception," said Realacci, "and the results of our analyses also illustrate the adverse effect of the defeat of the referendum on pesticides: an increasingly massive and unchecked use of substances dangerous to health. Yet, we should not forget that one year ago 18 million Italians voted 'yes' to an agriculture without poisons." Perhaps precisely one of those [voters] ran the risk of coming across that Aldrin lettuce, which happened to end up in the Environmental League's "little basket".

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